

**VOLUME IX**

**NO. 1**

# **WESTERN INDUSTRY**



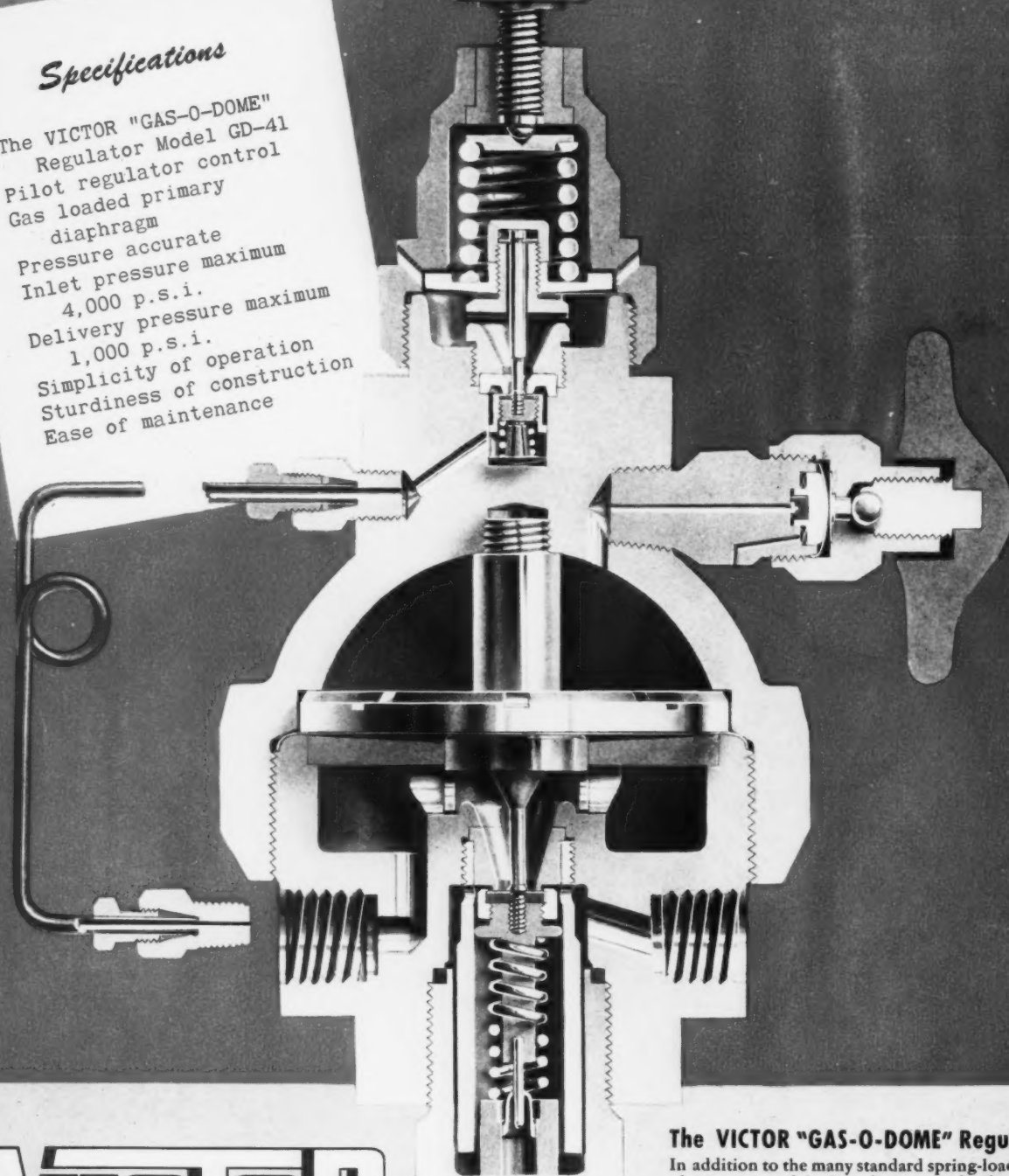
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**January, 1944**

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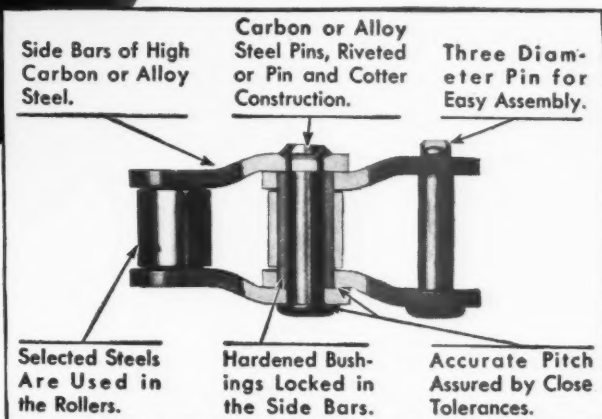
## ② "DID IT EVER FILL THE BILL!

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## EDITORIAL COMMENT

(Communications on any subject of interest to our readers are welcomed. If author wishes, his name will not be used. Unsigned contributions will be disregarded.)

### Long Range Attitude Needed

THE least agreeable problem in regard to West Coast manpower still lies ahead, and although it may not require solution for months to come, it warrants immediate study.

It is simply this: when opportunities for civilian production begin to open up, will the big key organizations of our West Coast war industries be willing to relax their dominating grip on manpower sufficiently to permit smaller firms to take essential civilian contracts?

A favorable attitude on the part of major industry would permit the development of a more stabilized economy in the West, so that essential civilian needs and services could be supplied locally without subjecting transcontinental railroads to further strain at a time when the West Coast is becoming the front for the big offensive against Japan. These civilian contracts would not interfere to any appreciable extent with war production and would also open the way for a healthy post-war economy.

On the other hand, if the key organizations are unfavorable, it is either because: (1) they and their related government procurement agencies fail to see the whole picture; (2) their war enterprises have no future and so must be exploited to the limit now; (3) they want to take no risk of losing command of the peace-time situation.

Two dangers will arise from an unwilling attitude toward releasing manpower. The first is that essential civilian needs of war workers will suffer and their morale of productive capacity be impaired; the second that when war contracts stop the community will have nothing to fall back on until such time as key plants retool for post-war products they won't now admit they have under consideration.

Procurement agencies for the armed services may quite naturally feel that it would be undesirable to release any considerable amount of manpower for other work than ships or planes. But with shipyards, for example, shouting about their production records and one of them proclaiming that it is 86 years ahead of schedule, it does seem certain that adjustments can be made without endangering our armed forces in the slightest. Improved labor utilization should provide a liberal margin for essential civilian contracts.

One of the great needs of the industrial West is a public affairs forum where problems like this could be discussed. There have been a few meetings where some aspects of our industrial situation have been touched on, but a general meeting of some kind would be desirable, where responsible industry executives could answer questions.

### Keep On the Alert

INDUSTRIALISTS in the West will do well to watch carefully the Washington news letter published regularly in *Western Industry*. A rough outline of the possible future of the industrial West is beginning to appear in the discussions before congressional committees and in the comments of administrative leaders reported by our Washington editor. Whether this rough outline will become the final pattern will depend in considerable measure on the alertness of our industrialists and their activity in presenting a case for the united West at Washington. These are days of golden opportunity—days in which to think and act.

# WESTERN INDUSTRY

News, Methods, Solutions to Problems of the Principal Manufacturing and Processing Industries of the West

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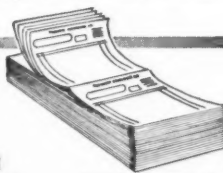
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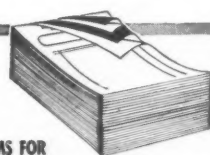
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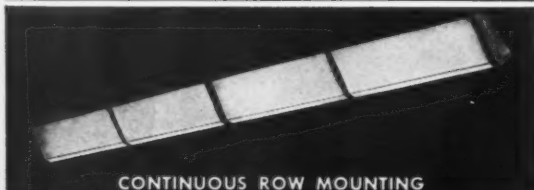
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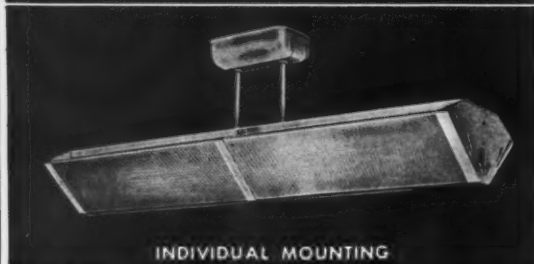
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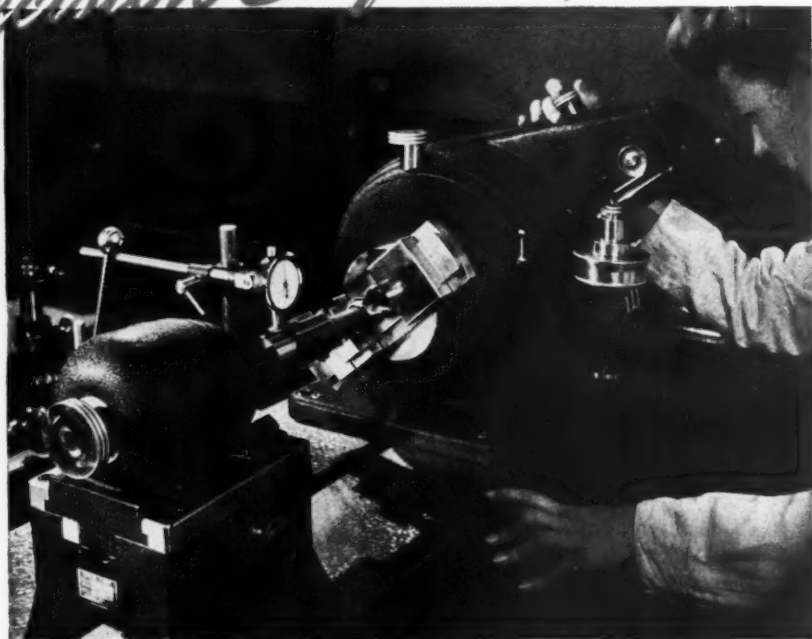
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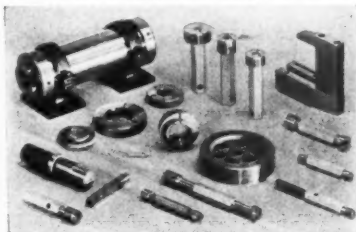
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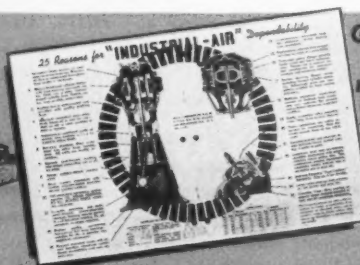
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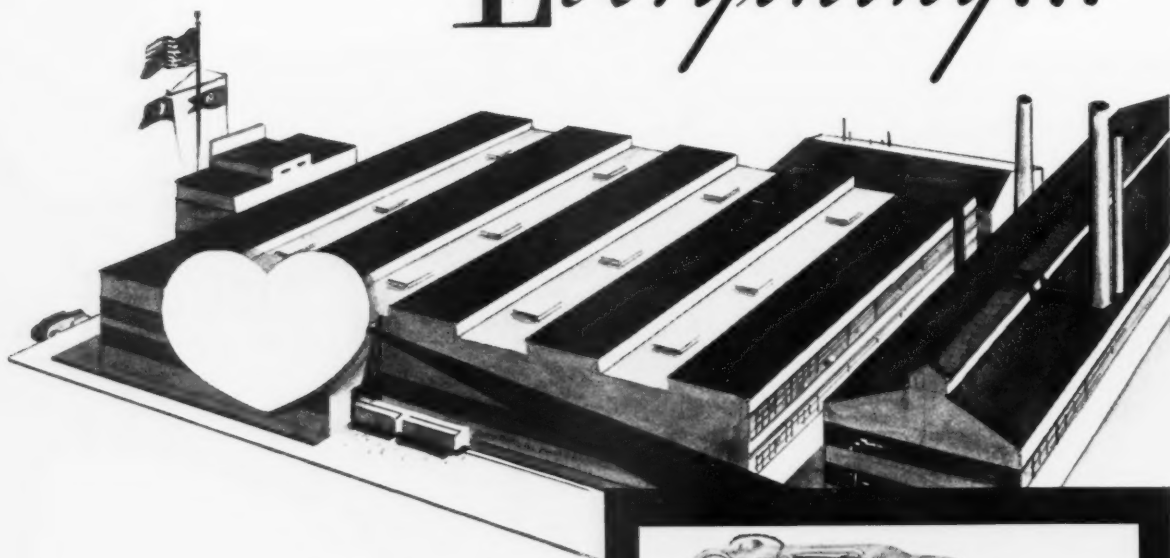
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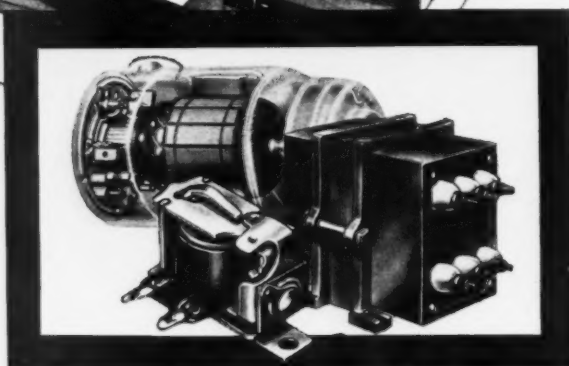
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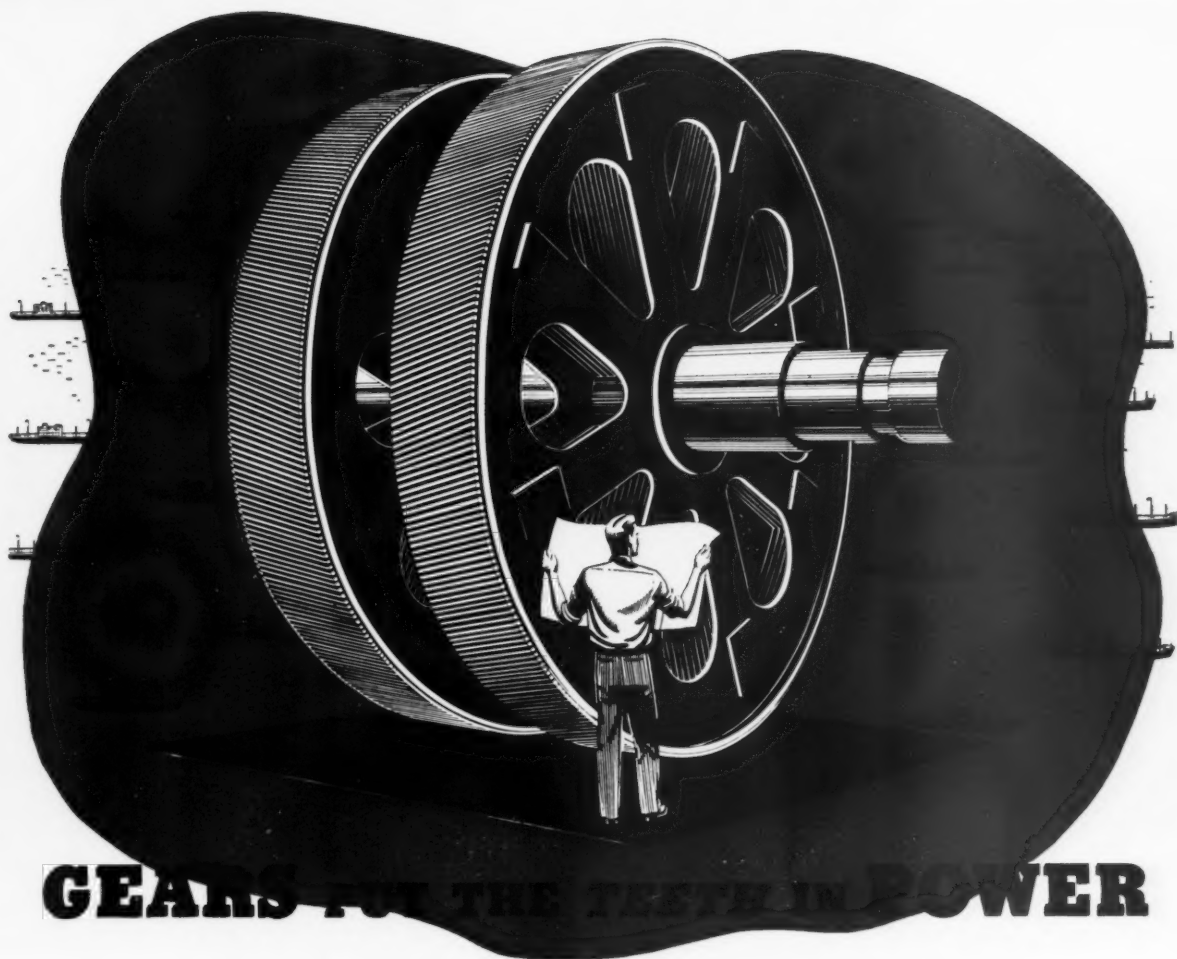


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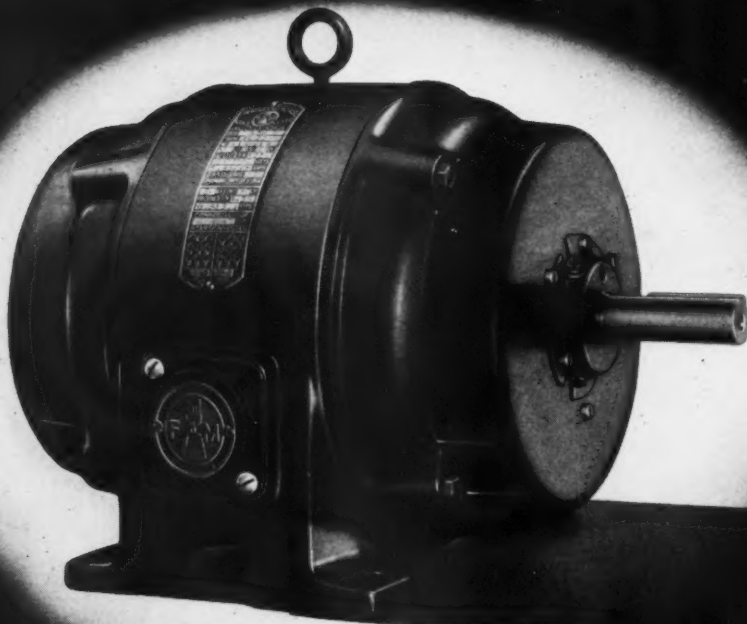
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FARM EQUIPMENT  
RAILROAD EQUIPMENT



**Motors**



# Spotlight

## on the NEWS

**WESTERN INDUSTRY**  
**FOR JANUARY, 1944**

VOLUME IX

NUMBER 1

### **First Civilian Contracts**

Two firms in Seattle and another in Portland, Ore., have been given permission to manufacture more than 4,000 electrical water heaters for civilian use.

The National Steel Construction Company will make 3,449 of the heaters and Winn & Co. will make 250 in Seattle. A Portland, Ore., firm will make 500 dairy-type water heaters.

Permission was granted to alleviate a heater shortage which has become so acute that war workers have been without the facilities in some government housing projects.

### **Armed Troop Transports**

Construction of heavily armed troop transports is the next big marine job on the Pacific Coast after landing craft, which now rank first in priority. At the Oregon Shipbuilding Corporation yard at Portland and the Kaiser Company, Inc. yard at Vancouver, Washington, converted 455-foot Victory ships will be built. The former has been building 10,500-ton Liberty freighters and the latter escort aircraft carriers. Thirty-four of the 84 victory ships for which California Shipbuilding Corp. at Wilmington has contracts will be converted to this type of transports beginning April 1, the last one to be delivered by December 31, 1944. Commercial Iron Works in Portland is converting hulls towed from San Francisco.

### **Stand By For the Jackpot**

Eversharp, Inc. have announced intentions of opening a plant soon in Denver for pen point production, with 80 persons to be employed in the initial production plans.

### **Look To Siberian Market**

Because America's Pacific Northwest is so near to Russia's Pacific Northwest, Siberia being as close to Seattle as is New York and the large city of Petropavlovsk in Kamchatka can be reached by plane in one day, a study of economic and financial relations with Russia will be made by Dr. Robert Mosse, special research professor of the College of Economics and Business, University of Washington.

"While American civilization has moved westward, Russia has been pushing eastward," announces Dr. Nathanael Engle, director of the Bureau of Business Research of the university. "In the past 15 years Siberia has been expanding east of Lake Baikal and the Lena River.

"New developments after the war may be expected to open up this vast region economically in a way unheard of but a few years ago and little realized by most Americans today. Aircraft, airlines, shipping and the new light metals industry of the Pacific Northwest should look toward Russia for markets after the war."

### **Washington Payrolls Mount**

Pay rolls in Washington's hazardous industries for the first eight months of 1943 totaled \$715,914,359, an increase of 145 per cent over the comparable 1941 pay rolls of \$292,637,250.

Over the comparable period of 1942, pay rolls increased 48 per cent, work hours gained more than 25½ per cent, and the average hourly wage was up 17½ per cent.

The average hourly wage in these industries jumped from 80½ cents in January, 1941, to approximately \$1.18 in August, 1943, an average increase of almost 46½ cents, or approximately 31 per cent more than the "Little Steel" formula's schedule for increase.

### **From Bombs To Bomber Fuel**

The \$10,000,000 toluene plant of Standard Oil Company of California at Richmond produced in ten months last year a quantity of toluene sufficient to make TNT enough to destroy four cities the size of San Francisco. In December 1943 it was converted to production of aviation gasoline, using the catalytic method of making of toluene, or high octane, from straight-run gasoline. Standard also is constructing a \$13,500,000 government-financed aviation gasoline plant at Richmond consisting of two thermofore catalytic cracking units and an alkylation plant.

### **Utah Coking and Pig Begin**

Coke production began at the \$180,000,000 steel plant at Geneva, Utah, Dec. 14, followed later in the month by production of pig iron in the first of three blast furnaces. Next step will be putting the first three of nine open hearth furnaces for making steel ingots. When the Geneva plant swings into full operation it will produce approximately 1,200,000 tons of steel ingots annually. WPB has halted construction of the structural steel mill at Geneva because capacity of existing mills is adequate.

### **90 Percent From the West**

Over 90 per cent of the strategic metals used in the nation's war production plants in the last two years have come from the mineral empire of the Western states, according to J. Reed Lane, chief of the newly organized Western Section of WPB's mining division. Although the majority of mineral stockpiles have reached safe levels, there must be no let-up in production of copper, lead, zinc, mercury, manganese, etc.





## Standard Carboloy Tool Prices Now Generally Comparable to All Types of Cutting Tool Materials

**T**HE STEADY INCREASE in acceptance of Standard Carboloy Tools has made possible constant improvement in our quantity manufacturing technique to the point where highly efficient single-purpose equipment has been developed for practically all operations, effecting substantial economies in our mass production methods.

This has made possible a further price reduction—effective December 6, 1943—in the price of single point Standard Carboloy Tools to a level where they are now generally comparable, in price, with tools made of *ALL* types of cutting materials. These new, low prices now justify—more

than ever before—your review of all single point tool turning, boring and facing applications not at present receiving the benefits of carbide use—in terms of increased production, faster machining speeds, better finish, longer tool life and lower cost per piece produced.

**CARBOLOY COMPANY, INC., DETROIT 32, MICHIGAN**

LOS ANGELES (Huntington Park)—5905 S. Pacific Blvd. SEATTLE—704 Third Ave.  
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Send for revised price list covering 10 Standard Styles, 5 Standard Grades, for cutting steel, cast iron, non-ferrous metals, etc.



# CARBOLOY

TRADEMARK

For Cutting  
**CAST IRON**  
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For Cutting  
**STEEL**

TUNGSTEN CARBIDES \*\*\* TUNGSTEN CARBIDES WITH TANTALUM AND/OR TITANIUM CARBIDES

# WEST MUST FIGHT ON FOR INDUSTRIAL RECOGNITION

**Post-war Attitude of Washington and Eastern Capital Depends  
On the Foresight, Ingenuity and Determination of Westerners**

**L**ET us consider the great changes which the war has brought to our state and to the West. Without diminishing our importance as an agricultural state in any way, we have within a period of two years become an industrial state.

What we have been able to produce in our great industrial plants has so improved our military prospects that the figures are no longer kept a military secret. Instead, they are aimed as effective propaganda at an enemy which must fairly cringe at the totals.

But you know and I know that the greater portion of this industrial expansion came to us through no planning of our own. It was ordered for us, built for us, tooled for us, and kept going for us with war contracts. When it is realized that the War Production Board credits this state with more than eight and a half billion dollars in airplane contracts and total war contracts of more than fifteen billion dollars, it can be readily understood that Washington's post war attitude toward our state is going to have a vital influence upon our entire economy.

It is a foregone conclusion that when this war is over, many of the great industries which now provide employment for so many thousands of workers will close their doors. Whether these plants are ever retooled and reopened, and new employment furnished for those hundreds of thousands of people, will depend largely upon what we can do about it. It will depend upon our own foresight, ingenuity, aggressiveness and determination.

Washington control of our greatest industries is, however, but one of the factors which should spur us on to the creation of new uses for our western resources. It is not the only place where policy in regard to western investment has yet to be determined.

Regardless of the arguments we can develop that national welfare and security

By **EARL WARREN**  
Governor of California

can be benefited by granting new peacetime industrial recognition to the West, it must not be forgotten that precedent argues in the negative and for understandable reasons. Eastern industrial monopoly, entrenched in eastern financial and political centers, has yet to make investments in our industrial plants which would encourage its sharing of our enthusiasms. The manner in which we were able to respond to the emergency needs of Uncle Sam may have opened some eyes, but the educational process in relation to post war opportunities has just started.

We here in the west have a further job of selling to do on a national basis. It's a job no one is going to do for us. It calls for the same prerequisites as any other successful selling mission—purposefulness and determination. And, it calls for knowledge of fact and detail.

This West of ours has long been known primarily as a great farming, mining and lumbering area about the size of western Europe and populated by a mere handful of people in comparison with the older

sections of the world. It has been conceived, in many parts of the world, as being an area peculiarly blessed with undeveloped resources and with possibly more than the normal amount of romance and natural advantage. Yet, it has been more or less classified as an area of the future—an area which would probably some day make an important contribution to the advancement of human society.

I think this war has altered the thoughts of many people in this world in regard to our importance in the present day scheme of things. In fact, I have a suspicion that the materials of war which have been and are still pouring from our factories, have had a rather profound impression upon some of the officers of the Nazi and Nipponese general staffs.

This war has crystallized the thinking of people in many parts of the world as to our abilities as well as potentialities. It has afforded us opportunity to demonstrate our usefulness, effectiveness and advantages in many ways and there is no reason why this recognition should not increase with the return of peace.

It has started a flow of iron ore and coal pouring into new steel plants here in the West. Our lumber industry is discovering new and important products adaptable to peacetime use. New plants are manufacturing airplanes, synthetic rubber, new chemicals, new plastics. New processes in which our technicians excel can open doors of commerce and activity of which we have known nothing before.

To reap the full harvest of our prospects, we must develop all the basic facts which will be useful as guides to individuals and groups charged with the responsibility of analyzing and interpreting opportunities for investment and new enterprise. We must enlarge upon our rapidly expanding environment for industrial expansion by uncovering more and more details regard-

This address by Governor Warren before the Associated General Contractors in San Francisco on Dec. 10 typifies the alertness of Western governors and state officials in general to the need of active effort to hold the West's new and tremendous industrial gains. Western Congressmen are also very active in the matter, as is reported in this issue by the Washington editor of *Western Industry*. But a united Western organization still has to be built.



• Pouring steel from the melting furnace of Oregon Steel Foundry at Portland, a cooperating company in Oregon War Industries pool.

ing what exists and what can cooperatively be made to exist.

No man can envision all the prospects which are ours here in the West. Science has barely started in its exploration of possibilities. We know that research scientists have within but a period of two years changed many of the world's customary production practices and procedures.

We here in the West have already contributed much to these changes and are destined to be heavy contributors to even greater changes in the future, for who would be so foolhardy as to say that we have yet matured in either science or technology.

I cite you the recent developments with light metals and plastics as sufficient proof in itself that we are a part of this march of progress.

We can make ourselves leaders in all those fields of activity which will better serve the home and the personal needs of mankind. We can provide the transportation and the means of communication. In fact, I believe that with less risk to in-

vestment and less threat to present standards than exist anywhere else in the world, we can make of ourselves the arsenal of improved standards of living for millions upon millions of people with whom we have never had commerce.

#### Eric Johnston's Views

It is unthinkable that the government will permit the scrapping of the big war plants in the West, certainly as far as the first five years is concerned, according to Eric Johnston of Spokane, president of the United States Chamber of Commerce.

At a press conference in San Francisco December 16, he said the eyes of the rest of the country are on the Pacific Coast and Texas, watching for future developments, and that the country is expecting the Coast to grow to full economic stature.

Tremendous interest is being manifested by boards of directors of some of the largest corporations in the development that the Pacific Coast has been experiencing, he reported, and many manufacturers are giving the area thorough study with a view to locating branch factories.

These are some of the thoughts that flow through my mind when I try to visualize our future here on the Pacific Coast. They are some of the reasons why I have been giving my energy to the advancement of post war planning programs.

The governors of these western states have been meeting to discuss our common problems in recognition of the fact our post war problem involves the entire West. It is this spirit which has caused them to urge their post war planning directors and technicians to frequent consultation.

I have a conception of post war planning which calls for far more than offering dry facts in the light of helpful policy, however. I see workers and employers, investors and trustees, civic leaders and officials in all levels of government pooling their energies and their ingenuity in common cause. I see a scratching of surfaces yet untouched, an exploration of corners yet unvisited, and a stirring of mass responsibility unapproached by anything yet experienced.

Post war planning to me is a personal job—personal to everyone.



# No Quick Post-War Relief From Government Controls

**M**OST of us are looking forward to the day when the end of the war will bring the removal of many of the regulations and restrictions under which business is now operating.

It may be worth while to examine this prospect a little and see how far such hopes may be justified. Let's look at some of the more important fields in which government regulation affects the present and future operation of almost every business, and see whether this regulation is likely to extend into the post-war period, and why, and how.

If we take about a dozen fields of regulation and list the government agencies that now do the regulating, and note briefly what seem to be the current trends, we may develop some interesting conclusions.

1. *Termination of Contracts*—by the War and Navy Departments and the Maritime Commission, or by a new combined agency.

One business news service says that 10 billion dollars in contracts have already been cancelled or terminated, while other reports place the amount as high as 30 billion dollars. Whatever the right figure may be, it will increase and even a gradual increase will have far-reaching effects.

Termination of any sizable contract affects not only the plant that has the contract, and plants that have subcontracts, but also the lunch counter outside the plant gate, the gas station on the corner, the utility that supplies light and power, and the printer who furnishes the letterheads for all the correspondence with Washington. Contract termination will directly or indirectly affect all of us.

2. *Rationing and Price Control*—by the Office of Price Administration.

While there is evidence that OPA will seek to have its life and functions prolonged into the postwar period, and while legal sanctions for this might possibly be found, it seems more likely that controls of this type needed in the shift from war to peace will be exercised under some new legislation or under the broad powers of the Department of Commerce, Federal Trade Commission, or Interstate Commerce Commission.

3. *Materials Control*—by the War Production Board.

The comment just made about the OPA is equally descriptive of the WPB. It seems likely that some allocation of basic materials may be necessary in postwar

By STUART PARRY WALSH  
Economic Counsel,  
Office of the Attorney General of California

days, whether by the WPB or some more permanently constituted agency.

4. *Manpower Controls*—by the War Manpower Commission.

Again the same comment may be made, for while a severe shortage of manpower may turn into a surplus, conditions will vary so greatly in different parts of the country that some nationwide channeling of labor supply may be necessary. It might be handled, however, by a rejuvenated Department of Labor or by the U. S. Employment Service.

5. *Taxation*—By the Treasury Department.

Wartime taxes have probably not yet reached their peak, and it is very unlikely that the tax burden will be reduced materially when the war ends, though there will be increased provision of incentives for conversion and expansion of business.

6. *Labor Relations*—by the National War Labor Board and National Labor Relations Board.

With the increased labor difficulties that are ahead of us, we may hope for a merger of the two Labor Boards into one administrative body which will carry on into the postwar period. Workers as well as machines will have to be converted to postwar production, and this vast retraining program will probably involve the work of other government departments.

7. *Disposal of Government Stockpiles*—by the Armed Forces, Treasury Department, Redistribution Division of WPB, Defense Supplies Corporation and Metals Reserve Company (RFC), etc. Fifty billion dollars is the Bureau of Budget estimate of the surplus goods that will be on hand at war's end. These will include vast stocks of such consumer items as dishes, furniture, bedding, clothing, shoes, tools, and household appliances.

A billion dollars worth of steel and equipment has already been offered for sale by the War Production Board. Already a pattern is being set for the sale of surplus stocks by the Army through its Procurement Offices, and the intention seems to be that surplus goods will be released gradually into commercial channels.

Little has been said in official quarters as yet about the possibility that large portions of these goods might be kept off the domestic market by turning them over to

lend-lease or by distributing them directly through the Armed Forces in occupied or liberated countries.

8. *Disposal of Government Plants*—by the Defense Plant Corporation, the Maritime Commission, the Rubber Reserve Company, etc. Government-owned plants costing more than twenty billion dollars are to be leased, sold, closed, dismantled—or government-operated—when the war is over, and the policies to be followed will greatly affect almost every kind of private industry.

Thus far there is little to indicate what will happen. The location of many of these plants has been determined by political rather than economic considerations. Many of them are nothing more than sheds over production equipment that can easily be removed to other sites. It is estimated that present operators have options on about half the government-owned plants, but probably less than half these options will be taken up.

9. *The Lend-Lease Program*—by the Lend-Lease Administration and the Coordinator of Inter-American Affairs. Economists tell us that there are not enough ships in the world to transport, within five years after the war ends, all the cattle, foodstuffs, construction equipment and consumer goods that will be needed to restore the occupied countries overseas.

On the one hand there are those who believe that the volume of this outgoing commerce will overtax our greatest productive resources and require the rationing of goods and materials long after the war ends; on the other hand there are foreign trade authorities who believe that such a view is entirely unwarranted. How much we continue to send abroad is a question that may turn out to affect American industry more profoundly than any other postwar consideration.

10. *Public Works Program*—by the Federal Works Agency and State Departments of Public Works. Public works are in advanced stages of preparation at Washington, while California and other states are drafting extensive plans of their own to be financed by large reserves now being accumulated.

We do not know how immediate or how adequate will be the employment afforded by these programs to meet dislocations arising from the termination of war contracts. Neither do we know whether the federal program will be administered on a grant-in-aid basis such as has been the

practice regarding federal highways constructed under state auspices, or whether postwar projects will be administered directly by Washington bureaus. The former policy would seem to be the better one.

11. *Demobilization of Armed Forces*—by the Army and Navy, Veterans' Administration, and United States Employment Service. While a gradual demobilization is intended, it is possible that as in World War I the pressure from within the Armed Forces and from their families may result in a much more rapid discharge into civilian life than might be sound from an economic or a military standpoint.

There is some inclination to give Selective Service Boards a major role in demobilization, but it seems more likely that the agencies mentioned above will handle the job, particularly if Selective Service Boards are still busy inducting young men to replace returning veterans in occupational forces.

12. *Fiscal Policies*—by the Treasury Department, the Reconstruction Finance Corporation, and the Federal Reserve System. Federal plans for money and credit will vitally affect all business planning, particularly as regards the financing of reconversion and the venturing of capital for new or expanded enterprises.

Already V Loans have become VT Loans, with provisions for cushioning the shock of contract cancellations, and these loans are likely to be available for conversion and adjustment expenditures of many kinds. Beyond this there is little indication of what our fiscal policies will be, and they will of course depend upon the action of Congress.

If we were to continue through the list of other important functions such as tariffs, shipping, marketing standards, patents, housing, anti-trust prosecutions, interstate

commerce, and so on, we would find nearly all of them administered under long-established state and federal authority.

It is evident from this rapid survey that most of the wartime government activities affecting business are carried on either by pre-war constitutional and legislatively created agencies, or by emergency executive offices whose functions could readily be transferred to these pre-war agencies.

In other words, while a change of administration or a vigorous public reaction might move the center of power in Washington from the west end of Constitution Avenue to the east end, there are a lot of institutions on that street that would absorb a good deal of the power along the way.

Those who have been in Washington know that among the buildings located between the White House and the Capitol are the Department of Commerce, Department of Labor, Department of Justice, and Federal Trade Commission—not to mention the Archives and the Smithsonian Institution, which might be considered fitting resting places for some of the administrative curiosities which the war has produced.

This shift of power would mean that regulation of business will come into the hands of agencies long established and generally in good repute, with greater responsibility to Congress for sound and fair operation, but it would not necessarily mean any great reduction in the amount of regulation that government would exercise.

That this is the present trend of thinking in high government circles is reflected in a recent story in the *Wall Street Journal*, describing in detail a proposal credited to Justice Byrnes and Judge Roseman—calling for a Post-Armistice Departmental

Council to coordinate all economic functions. Under this plan only the OPA, of all the war-created executive agencies, would remain, and every other activity would be placed in the hands of permanent government bodies. Latest indications are that Bernard Baruch is to be responsible for shaping such a program.

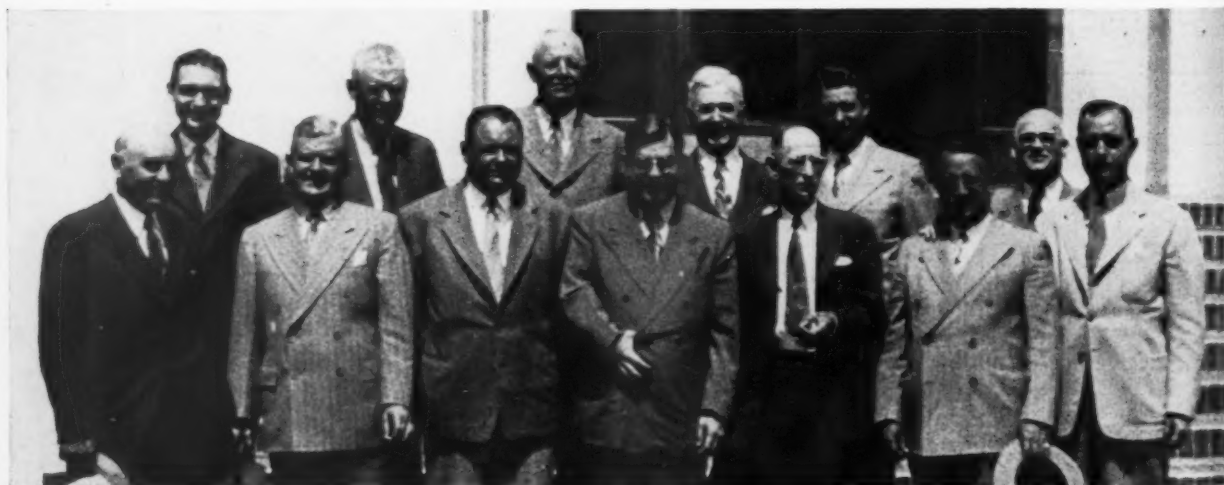
But we must not assume that this development will occur unopposed. While we may discount on the one hand the efforts of those who would restore "complete freedom" to business—a freedom that it didn't have in pre-war days—we cannot overlook those who hold the opposite view that only a completely planned and regimented economy can meet our postwar needs.

There are some sociologists and a few economists who believe that our wartime controls are only timid steps in the direction we must hereafter follow.

Against these extremists we have the protection of state governors and legislatures alert to resist threats to their local integrity, and we have a Congress that must clearly see the threats to freedom that are inherent in the planned economy idea.

We face grave problems in government control of industry, and we need to remember that while these problems are economic in their nature, they will be solved largely by political action, in our legislatures and in Congress.

The Washington letter by Arnold Kruckman in the December number of *WESTERN INDUSTRY*, describing the need for backing up our senators and congressmen, should be taken seriously by everyone who gets his living from trade or industry in the West. Numerically our congressional delegations are weak; only by vigorous and concerted action can they protect the industrial gains that should carry over into postwar days.



**CALIFORNIA COMMITTEE ON INTERSTATE COOPERATION.** Back row: Perry H. Taft, regional representative, Council of State Governments; W. C. Jacobsen, secretary, California Commission on Interstate Cooperation; Senator Ed Fletcher, San Diego; Gordon H. Garland, Director of Motor Vehicles; Senator Randolph Vollier, Yreka; Assemblyman Jack Massion, Los Angeles. Front row: Assemblyman James Thorp, Lockeford; John F. Hassler, Director of Finance; Assemblyman Harry Hasten, Brawley; Robert W. Kenny, Attorney General; Senator Roy Cunningham, Hanford; Assemblyman Harrison Call, Redwood City; Assemblyman Gardiner Johnson, Berkeley. Absent were: Chas. Purcell, Director of Public Works; William H. Moore, Director of Natural Resources; Senator Thomas Keating, San Rafael; Senator Jesse Mayo, Angels Camp.





• Rigger and a welder at Basic Magnesium plant in southern Nevada look out across the impressiveness of the plant they helped build.

# Your Reputation Is Made By Tales Employees Tell

**W**HAT do the people think of you and your business right now? Whatever they think, good or bad, it's what your employees told their neighbors.

Stories of loafing at aircraft plants or stalling in the shipyards are not told by management nor dreamed up by radicals. They were told by employees.

When men become idle in a department of an airframe plant and stand around all day with nothing to do, the answer is usually found in an unavoidable interruption somewhere along the line which keeps material away from them, the tying up of parts in transit or some similar good and sound reason.

If employees are told, they ordinarily accept the explanation and "sweat out" the interruption in good spirit. But, when they are not told, then their families, their neighbors and their associates hear tall

By RANDOLPH VAN NOSTRAND\*  
Director of Public Relations,  
Merchants and Manufacturers Assn., Los Angeles

tales of labor hoarding and condemnation of the company. In other words, because the sharing of information fell down these employees are now bad public relations representatives.

And what a silly procedure it must seem to employees to see the works manager cutting down the staff, probably for more efficiency, to watch a department cut from 300 people to 100, and then on the bus on the way home to see a large advertisement urging people to come to work for the company. What such employees say about you is bad public relations.

There are about 1,500,000 employees in Los Angeles County alone. They, with their families are the public of this area. What do they think of your personnel policy?

The answer, of course, depends upon your policy and how you are working it. The accompanying quotations tell what *your* employees think today and what they are telling the rest of the public.

They serve to point out one very important fact; that is, that every employee in your company is a public relations representative of the company.

Your employees have ideas about supervision, methods, wages, safety, company policy. Some of them have emphatic ideas about unions. Also, they each have a life of their own—away from the shop, but having a real influence on attitude and efficiency.

The average American worker of today is not interested only in more money and less work, although there are some like that. The average American still wants to have pride in his job, still wants to "belong," still wants to make a worthy contribution on his job.

\*Extracts from address to the Southern California Personnel Conference, Los Angeles, Dec. 2, 1943.

Else, why do employees stay year after year with companies which cannot afford to pay as much as others. And why are the sincere efforts of management to exert responsibility for leadership and to arrive at a closer understanding with employees, always crowned with so much success?

I should like to emphasize what all of you know—that employee relationships are human relationships.

No matter what the size of your business, the people who work under the same roof with you have one thing in common with all of the millions of people who work for a living in America.

They are all products of the American school system. Your present employees, and those whom you will hire some day soon, have been taught in school that in this great country of ours individuals have definite, unalienable rights, among them freedom of speech, freedom of religion, freedom of press, the right to life, liberty and the pursuit of happiness, which should include working at a job of their own choice. They have received the impression that under the American free enterprise system they have opportunity.

When they come to us in the working world, they bring with them the deep-rooted conviction that, as Americans, these rights of which they have learned, these opportunities which they have sensed, are preserved for them as individuals and that if they gain experience with us, we, as their employers, will follow the pattern they have learned to expect.

What has happened to the bright dream, the great hopes, the eager attitudes of these youngsters as they grow older and as they become definitely a part of our system of free enterprise, is influenced in no small measure by their personal discoveries in the working world and the meeting and molding processes which have resulted

from the particular personnel policies with which they have come in contact.

In other words, what the public thinks of business is fundamentally what business has taught it.

If attacks upon "economic royalists" and "princes of privilege" have clouded the sun of public opinion, it is only because employees have been doing a bad public relations job.

I think it is inescapable that one of the prime responsibilities of management is the responsibility for leadership. In order to exercise leadership, management very definitely must know where it is going—what it is trying to accomplish. That knowledge on the part of management furnishes the first of the tools of your business and industrial relations, or an employee relations, or a human relations policy, which should not be confused with rules and regulations.

Policy is that plan of action founded upon mutual understanding and acceptance which reflect leadership of a character which proves its right to lead and makes for mutual understanding between management and men. Policy is the thing which makes corporate or company personality.

Your first opportunity to exercise your policy and thereby to promote good public relations comes with the new employee's application for employment.

One of the great weaknesses in personnel policy with respect to its public relations aspect has been the failure honestly and completely to represent the job to the applicant.

The bright story of a high wages, the company cafeteria, beautiful surroundings, pleasant companionship, if swallowed whole by the potential employee, can lead to great disillusionment when it is found that eight hours of work a day are also

#### Financial Report for Employees

1. Our company did business for the year in the total amount of \$——. This was spent as follows:
  - (a) for materials and supplies \$——
  - (b) for administration, not including salaries \$——
  - (c) for the expenses of the plant, rent, light and heat, etc. \$——
2. This left as available money \$——
  - (a) our employees were paid wages and salaries of \$——
  - (b) Uncle Sam took as taxes, social security, property income, excess profits \$——
  - (c) our stock holders, numbering ———, were paid 3 per cent on their investments a total of \$——
  - (d) we saved out for future improvements, for reserve to protect the business, for new machines, for post-war, etc. \$——

part of the picture, especially if this happens to be direct labor—not particularly clean work.

Good public relations is primarily a matter of good information. Both management, and your employees will profit from *sharing information*, and don't for heaven's sake, stop as soon as you get him on the production line, or behind a typewriter. Your program should provide for *keeping* employees informed as to business prospects and certain information with respect to production problems which have an effect upon his daily work.

Properly to exercise its leadership, management ought to go farther than that. You should tell your employees about management philosophy on economic and social problems. You should tell them of government regulations and controls, of economic trends affecting the business, of pressure influences and of public opinion generally.

Never forget you are competing with reports from government agencies which have their own notions, with propaganda by labor organizations, with the speeches of politicians, with newspaper and radio editorial and commentary. All of us have seen the horrible example of what happens when management retreats to its ivory tower, aloof and above its employees.

I'm trying to say that management should recognize that economic success rests upon unity of thought and action—that common understanding promotes greater efficiency and that the exchange of knowledge removes doubt and suspicion, builds up a feeling of personal interest far greater than mere pocket-book interest, and creates a sense of belonging.

Management should realize, however, that sharing information means that you yourself must often be on the receiving end. Employees have information to be shared. What *they* think of company policy and practice, their suggestions and ideas for improving operations, their individual and collective suggestions and complaints are important.

#### What Employees Think of Management Methods

(From a recent survey of a cross-section of Los Angeles employees)

"What has happened to the friendliness that used to exist among people? Will it come back after this war? What will the future hold in the way of pioneering possibilities?"

"What will the returning service men do for a living? What is going to happen after the war to all the workers in this area?"

"I realize that these are trying times, but the extreme lack of supervision exercised over new employees give me a pain."

"Poor supervision is one of the greatest ailments of business today. The average supervisor or foreman has very little training for the job and yet he can control the feeling of the men under him toward management, which is no little thing. The average foreman should be forced to take some kind of man-

agement—sponsor training on the psychology of handling men."

"Greater effort on the part of management to improve working conditions and safety through suggestions and co-operation with the employee, will, it has been proven, pay big dividends and should be more widely adopted."

"I believe that the personnel men should get together and eliminate all useless and unnecessary questions on the application forms, especially those which pertain to the applicant's personal affairs."

"If I were boss I would set up a system of direct negotiation between management and employees to settle controversies."

"At our company, if the time should ever arrive to tell the boss off, all we have to do is to say what is on our minds, as the boss is one of the boys."



**MANPOWER ROUNDUP.** Pacific Coast Labor-Management Committee and WMC officials. Around the table, left to right: C. J. Haggerty, secretary-treasurer, California State Federation of Labor; James A. Taylor, Washington State Federation of Labor; J. H. Kindleberger, president, North American Aviation, Inc.; Phillip Connolly, president, California State CIO; J. J. Sullivan, assistant personnel manager, Southern Pacific Company; R. T. Gilman, International Woodworkers of America; Leo R. Werts, assistant executive director, WMC; William Darsie, agricultural representative; William K. Hopkins, regional director, WMC; Phillip Coxon, vice president, Moore Drydock Corporation; Dean Ballard, Seattle Distributors Association; C. J. Born, general district chairman, Intl. Assn. of Machinists. Standing: H. R. Harnish, Southern California; William Royle, Nevada; L. C. Stoll, Oregon; A. F. Hardy, Washington, State WMC directors. James P. Blaisdell, Northern California, and Robert Kendall, Arizona, not present when picture was taken.

## MANPOWER—Situation Appears Better

**Astronomical Demands Evaporate When Ceilings Are Set; Turnover Still Heavy But Aircraft Plants Show Slight Gain in Employment**

**N**EITHER William K. Hopkins, regional director of War Manpower Commission, nor the regional labor-management committee which has general supervision over administration of the West Coast Manpower Program, were willing to commit themselves as to the success or failure of the program until they had made a general analysis of the situation in a two-day session December 13-14.

Then they were ready to announce that flexibility, lack of paperwork and common-sense administration of the controlled referral plan had channeled labor where it would best serve the war effort. They said the effectiveness of the plan could best be measured by comparison with conditions last summer, when the labor market and labor demands were chaotic.

The committee is composed of the following:

**Management:** J. H. Kindleberger, president, North American Aviation, Inglewood; Dean Ballard, Seattle Distributors Association, Seattle; Phillip A. Coxon, Moore Drydock Corporation, Oakland; J. J. Sullivan, assistant personnel

manager, Southern Pacific Company, San Francisco.

**Labor:** C. J. Haggerty, president, California State Federation of Labor, AFL, San Francisco; Phillip Connolly, president, California State CIO, Los Angeles; James A. Taylor, Washington State Federation of Labor, Seattle; C. J. Born, general district chairman, International Association of Machinists, San Francisco; R. T. Gilman, International Woodworkers of America, Portland.

**Agriculture:** William Darsie, Walnut Grove. State directors for WMC, also in attendance at the December 13-14 session, gave reports as follows:

**San Francisco Bay area,** James P. Blaisdell, northern California director: definite and substantial reduction in stated needs of employers. Ceilings set on basis of October high water mark of employment compelled greater realization by employers of need for greater labor utilization.

**Southern California,** H. R. Harnish, director: records show transfer of 189,000 persons from non-essential to more critical war jobs within the last eight months.

**Seattle,** A. F. Hardy, Washington direc-

tor: manpower needs dropped partly because the plan has effected better distribution of available labor supply.

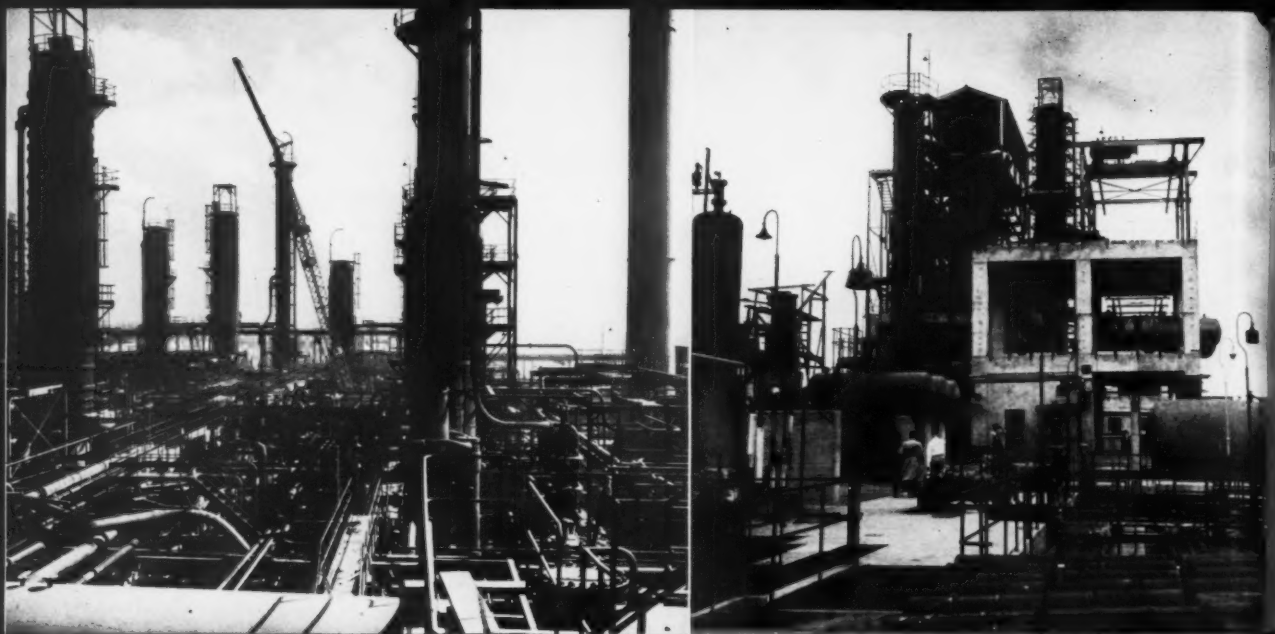
**Portland,** L. C. Stoll, Oregon director: elimination of unrestricted hiring resulted in revised labor requirements, turnover of men lowered by 4 per cent, women by 3 per cent. Production undiminished, even though ceilings reduced one-third.

**Nevada,** William Royle, director: West Coast Manpower Program will be voluntarily extended to Nevada in the near future, because of its demonstrated effectiveness, even though the directive by James F. Byrnes, Director of War Mobilization, does not require it in Nevada.

**Arizona,** Robert Kendall, director: records on copper production for the war show the lowest rate of job changing since records have been kept.

All of the published astronomical figures on reduction of labor requirements add up to the fact that no one has known what the actual labor needs are, nor can this be determined without an exhaustive





• New 100-octane gasoline plant of Union Oil Co. of California, in Los Angeles harbor area, which will go into action early in 1944, employs almost 1000 men, and represents investment of about \$40,000,000 all being advanced from company funds. Through conversion into gasoline of crude oil fractions not now used, the new plant will boost the average yield of gasoline 100%. Products other than 100 octane aviation gasoline which will be produced include Navy fuel and diesel oils, feed stock from which critical wartime products such as toluene will be produced. Left: Showing fractionating towers rising above maze of pipes, valves and functional equipment. They provide for separation of isobutane and butane. Right: View of catalytic reactors and auxiliary equipment in isomerization unit.

study. For example, the needs of 28 major West Coast shipyards were announced as scaled down from 130,000 to 33,000, and that nine yards in the San Francisco Bay area with a combined need for 68,000 were allowed an expansion of only 6,500 under the ceilings set up. These figures sound as though the shipyards were patterning their declarations for needs after the recent Japanese announcements of the number of American naval vessels they had sunk.

Aircraft plants, with a ceiling of 308,065, had total employment of 292,507 on November 1, and some of the plants were unable to absorb new workers as fast as referred to them. The shipyard ceiling is 486,982, and the total employment on November 1 was 453,067.

Despite the channeling of workers into essential industries, the turnover continues to be a pressing problem. During the first two months of the program, 294 firms with manpower priority ratings hired 37,281 persons out of the 42,776 workers sent them by USES but, during this same period, separations totalled 32,379, leaving a net employment gain of only 4,902.

Preliminary labor utilization surveys have been made in various Pacific Coast plants where the situation seemed to be most critical. In some instances the need has been for a higher wage level, and WMC has obtained relief from the War Labor Board. In others a more detailed study is being made.

To handle these detailed studies, a corps of experienced industrial engineers is be-

ing engaged, who act as utilization consultants. Heading the group are the following state chiefs of manpower utilization: Henry Babcock, in Southern California, who was formerly with North American; Larry Maringer, northern California, formerly affiliated with heavy industries; Lee Harding, Portland, of wide shipyard experience; Seattle, James Whitley, former foundry manager; Phoenix, Jim Rork, recent occupation analyst for WMC; Reno, Frank Ingram, well known in mining circles. All are under the direction of W. B. McCarter, regional chief of manpower utilization.

Individual company ceilings may be granted outright if the need is obvious. Otherwise studies are made of training, up-grading, job break-downs, record keeping, employment of women, plant layout, production control, inspection, work flow and other details.

Changes in classifications of areas by WMC since November 1 include the following:

Deleted from the critical list: Brawley and El Centro, Calif.; Corvallis and Eugene, Ore.; Price, Utah; Rock Springs, Wyo.; Wallace-Kellogg, Idaho.

From Group I (acute shortage) to Group 11 (labor stringency or labor shortage expected in six months): Ogden and Salt Lake City.

From Group I to Group III (slight labor surplus will remain after six months): Butte, Mont.

More than a billion dollars in war contracts were assigned southern California during the first six weeks of the program.

231 projects ranging from synthetic

rubber and high octane gasoline to landing barges, pipelines, and critical advance base equipment.

Largest individual items included several contracts calling for more than \$100,000,000 each in fighter planes or bombers. Other sizable projects covered ordnance, merchant ships, expansion of food processing and fish packing facilities, repair of sewers, improvement of key military roads, and enlargement of hospital facilities. Among the larger civilian projects was one for manufacture of more than \$1,000,000 worth of domestic ice refrigerators.

Homer Buckley, chairman of the California Employment Stabilization Commission, reported that the War Manpower Commission's labor freeze order has actually caused some unemployment in California.

He said that in some cases where workers were refused eligibility certificates that the department has managed to obtain jobs for them, but that also benefits have had to be paid to others.

Most of the persons unemployed, he said, included some who had difficulty in getting birth certificates needed for war industry work, some aliens, some who couldn't get housing, some who had neither tires nor gasoline to drive to work, and some who were barred by union restrictions.

Also, he said, there were a number of men who had been classified as 1-A in the draft whom employers were reluctant to hire.



## Appley Hands Out a Few Jolts

When Lawrence A. Appley, deputy chairman of the War Manpower Commission, got up to talk before the Los Angeles Personnel Conference on December 2, he apparently was a bit irked at hearing many references to WMC as a bunch of bureaucrats.

Since he is executive vice-president of Vick Chemical Co., and bureaucrating isn't his profession, he proceeded to tell industry a few of its own shortcomings in regard to the manpower situation.

As an example of a lot of unnecessary crying done by industrial leaders, he told a story of one employer who was able to reach the White House with a complaint that the manning tables were not protecting him from having his production crippled by losses from the draft. When a check-up was made by the government, they found that 1300 men he said had been drafted were still working in the plant, but in other divisions.

Appley said the same thing was true when they checked up with other plants. One firm apparently kept very poor records, and had a lot of people being fired—on their records—but the check-up found these same people in another department. They hadn't quit, and they hadn't been drafted, and it was a case either of no records being kept, or of records falsified.

He admitted the West Coast Manpower Program should have been announced from the West instead of being imposed from Washington, but also pointed out that it was a decentralized program as far as actual operation is concerned, and that WMC had cut its Washington force from 2400 to 1200 employees.

A basic formula for solution of any critical manpower problem, either national, or local, was laid down on November 6 by the national management-labor committee of WMC, which Appley characterized as the first occasion in American history that management, agriculture and labor had unanimously agreed on an issue of national importance. The committee felt this would obviate any need for national service legislation.

Regarding employment levels in individual establishments, he said:

"It is necessary to make clear that there is no law or policy in this country which forces an American worker to work under sub-standard conditions for no other reason than to get out needed production. Furthermore, I believe I am safe in the prediction that there never will be any such law or policy.

"If there are bona fide causes for failure to meet and maintain required employment levels, those causes must be removed. Following are some of the common ones: antiquated personnel policies, inadequate housing or transportation, unreasonable

wage differentials or levels, under-utilization, untrained or unskilled supervision, sub-standard working conditions, and many minor practices which are irritating and unnecessary.

"Such causes must be identified and programs worked out with each individual employer for their removal. There are many conditions beyond the control of the individual employer. It is, therefore, necessary to get the full support and cooperation of the community and of the Government agencies involved where their help will remove the difficulty.

"If, after all reasonable attempts have been made to meet and maintain required employment levels there is still failure to do so, we then have left only one alternative and that is to put the business somewhere else."

## Uniform Records On Absenteeism

One of the difficulties in ascertaining absenteeism percentages is the variation in definition of absenteeism. Consequently it is suggested by W. B. McCarter, chief of the division of manpower utilization for the War Manpower Commission for the Pacific Coast area, that the following uniform definition be used in recording and reporting absenteeism:

"For the purpose of these proposed records an employee is considered scheduled to work when the employer has work available and when the employer has no reason to expect, well in advance, that the em-

ployee will not be available for work at the specified time.

"An employee on a regularly scheduled vacation should not be considered as scheduled to work or absent. The same is true during an employer-ordered lay-off. On the other hand, an employee who requests time off at other than a regular vacation period should be considered as absent from scheduled work, even though permission is granted.

"An employee reported sick should be considered as absent from scheduled work until he returns. After an absence of more than seven days an employee should be considered as neither scheduled to work nor absent."

The following daily report of absentees is also suggested:

Date \_\_\_\_\_

Mr. \_\_\_\_\_  
 Mrs. \_\_\_\_\_  
 Miss \_\_\_\_\_

(Name of absentee) Emp. No. ( ) (Dept.) ( )

Failed to Report to Work on \_\_\_\_\_  
 (Mo.) (Day) (Yr.)

Shift (1) (2) (3).

Returned on \_\_\_\_\_  
 (Mo.) (Day) (Yr.)

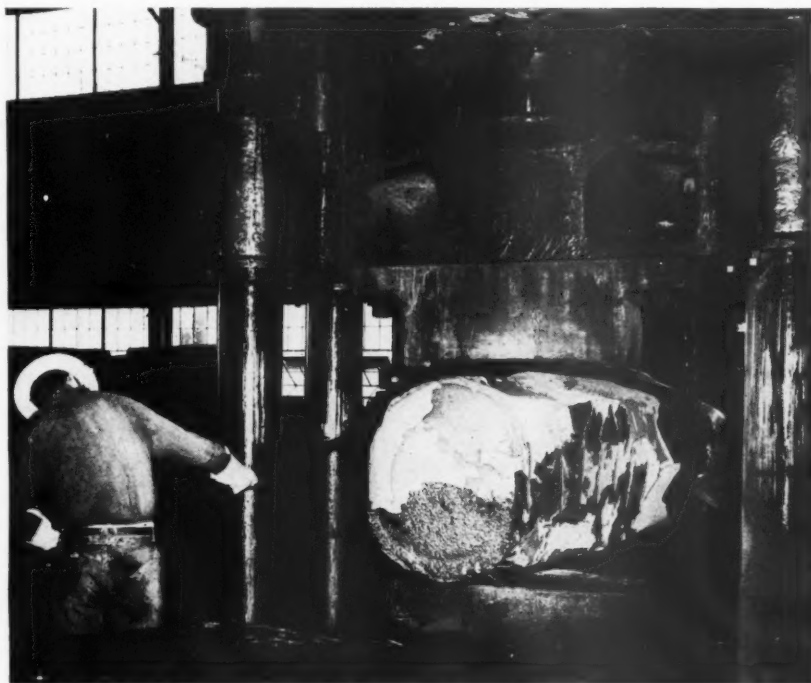
Number of days absent \_\_\_\_\_

Reason for absence \_\_\_\_\_

Length of service in company \_\_\_\_\_

Reported by:  
 Telephone ( )  
 Another Employee ( )  
 Letter ( )

Department Supervisor. \_\_\_\_\_



• NOT A SNOW-COVERED LOG, but instead a white-hot (about 2200 degrees) steel ingot in the 1,000-ton forging press of Earle M. Jorgenson Company in Los Angeles. May eventually become a marine crankshaft, connecting rod, or an oil well drill tower.



• STAFF OF "COPPER COMMANDO," Labor-Management newspaper of Anaconda and its union representatives, discussing special issue on end uses of copper. From left: Robert Newcomb, co-editor; Margaret Hocking, office secretary; John Bird, AFL; Dennis McCarthy, CIO; Les Bishop, staff photographer; John Boardman, safety editor; Ed Renouard, ACM, and Marg Sammons, co-editor.

## UNITY—Copper Commando Promotes It

*House Magazine with Responsibility Shared Equally by Labor and Management  
Is an Aid in Bringing About Proper Relations Between Employer and Employee*

THE employee publication appears to be coming into its own. Once the lowly "house organ" was regarded as a necessary evil by most managements, tolerated in the interest of providing employees with social chit-chat. More often than not ineptly edited by someone untrained in matters of either industrial relations or journalism, the house organ limped along; during the last war the mortality ran as high as 50 per cent.

But in the existing crisis, the house organ (or, as it is more properly called, the house magazine) seems to have ridden out the storm well. In the face of paper and other material shortages, many house publications have justified their existence by helping weld labor and management in the common effort to win the war.

With industry turning its thoughts to post war problems, the house magazine begins to fit into the pattern. Having helped to consolidate the interests of labor and management in a time of war, they are going to be drafted in many cases to help keep harmonious relationships during the post war era.

There are today more than 3,000 em-

By MARGUERITE SAMMONS  
Vice President, Robert Newcomb, Inc., New  
York City; Co-Editor Copper Commando, Labor-  
Management newspaper of the Anaconda Copper  
Mining Company and its Union Representatives

ployee publications in the United States and Canada. They run the gamut from elaborate publications of magazine size, with covers in color, to simple tabloid newspapers. The needs of editors are ministered to by the National Council of Industrial Editors Associations, a nationwide group comprised of approximately twenty local editing chapters.

Probably the most interesting publication to emerge from the war scene is Copper Commando. This bi-weekly tabloid newspaper was created for the Labor-Management Committees of the Anaconda Copper Mining Company and its Union representatives in Montana at the recommendation of the War Department and the War Production Board. At a time when copper was of tremendous importance in implementing the war, military minds felt that a publication dedicated to the purpose of relating the copper worker closely to the war would be of inestimable value.

The three Labor-Management Committees of the Anaconda organization at Butte, Anaconda and Great Falls concurred with the government's recommendation.

At this point, however, the procedure normally followed by house magazines was abandoned. Where virtually all existing house magazines were management devices, in the case of Copper Commando the responsibility for the publication was shared equally by labor and management.

In the short span of its existence—it is only a little more than a year old—it has become probably the best known employee publication in the country. It has been written up in more periodicals than any other known house magazine and has made a deep impression not only in government circles but also among representatives of management and labor both. "Started as an experiment," the Saturday Evening Post remarked, "Copper Commando has been tremendously successful."

In no sense of the word is the publication a management propaganda medium. Management officials of Anaconda insisted, along with labor, that the new publication not be an axe-grinding me-

dium for either side. When it came the selection of an editor, both sides in their zeal for neutral direction refused to select a local editor and turned to the War Department for a recommendation. The War Department recommended Robert Newcomb, head of a firm of industrial relations consultants in New York City which has specialized for many years in industrial media.

Students of industrial journalism, anxious to learn the secret of the success of Copper Commando, will find it absurdly simple: It is a twelve-page tabloid picture newspaper which seeks to relate the worker and his job to the war program. It accomplishes this by showing pictures of men on the job and by reporting, in simple and uneloquent language, just what the worker does.

It publishes also, since it is essentially a war production medium, stories and pictures of war operations and wherever possible it ties the worker himself close to the war. It does not publish, as so many publications do, the personal chit-chat, although in a sense the publication is largely a reflection of personalities.

The headquarters of the publication are maintained, by common agreement of management and labor, in a building apart from either labor or management property. Into these strictly neutral quarters comes a steady stream of workers and their wives and families.

They offer advice and suggestions on article material; they discuss with the editors the appearance of pages; they pass along "tips" on story possibilities for the future. They bring in pictures of their sons in the service and of their babies.

They heap upon the editors' desk specimens of ore, cartridge shells produced from the copper the miners have dug, as well as a variety of perhaps more practical tokens such as cakes and pies and pre-

serves. For the working man and his family have taken Copper Commando to their bosoms; they know it is edited for them and they look upon the publication in the light of their own child who must be coddled and taken care of.

This widespread feeling of paternalism on the part of the employee came about quite logically; when the editorial staff was chosen, management and labor agreed that they would share the responsibility for shaping the policy and directing the newspaper effort.

Since both the CIO and the AFL are represented in the mines and smelters of the Anaconda organization, one man from each union was chosen at each of the three locations along with a management representative. Thus the editorial advisory board is composed of nine men—six from labor and three from management, although the voting power is equal. In the event of a conflict of opinion, the neutral editor has the right to break the tie.

Management asks in respect to the publication, nothing which it will not grant in equal measure to labor. An item for publication submitted by management is given no weightier consideration than an item submitted by labor. If the editors feel that an item submitted by management is in conflict with the broad general principles laid down at the start, the item is thrown away.

That the publication has yielded dividends is indicated by the fact that, at the end of its first year, both management and labor enthusiastically voted for the continuance of the newspaper. As the official mouthpiece of the Labor-Management Committees, it has given expression to the views and activities of these bodies and has enabled the committees, working in harmony to win the war, to get their message across to the communities.

Often an employee publication is the only direct means of contact between employer and employee—this is certainly true in the large organization where personal contacts between top management and labor are no longer easy to maintain.

The employer-employee medium which reflects the common interests of both sides is doing and will continue to do a better job than the strictly management publication. The pro-management medium can do little more than express one side of the picture.

When the employee feels that he actually has a part in the publication, through the circumstances of seeing his own labor representative on the editorial board, he is more inclined to respect the publication and more inclined to believe what it says.

It is in the new mood of Copper Commando that industry now seems to be facing its post war publication problems. Compared with the staggering burdens which the post war period must necessarily pose, the problem of how to produce an effective employee publication is probably not a major one. But it is, after all, a matter which is vitally concerned with proper relations between the employer and the employee.

As the labor member of the editorial board of Copper Commando recently remarked, "If a publication such as ours can be effective in a time of war, in helping to build and retain better labor-management relations, there is no reason why it cannot do an effective job in a time of peace."

The significant point seems to be that the eyes of 3,000 editors throughout this country and Canada are on Copper Commando. As the editing profession's mouthpiece, "Stet," recently remarked, "The Anaconda newspaper, Copper Commando, certainly is blazing a trail, to the satisfaction of management and labor both."

• Left: Section of Butte Labor-Management Committee, Secretary W. J. McMahon reading correspondence. Right: Through displays at mines, committee shows miners the end uses of the copper they produce, bringing them into closer personal contact with the war.





# Making the Most of Available Womanpower

## Shift Placement

By ELEANORE BRADLEY  
Women's Personnel Director,  
Commercial Iron Works, Portland, Ore.

ONE point wherein local plants have received continued criticism is on the use of women on night shifts.

While actually the employer has no control over the shift on which the women will work when it comes to individual cases, it is still his responsibility to know each individual situation well enough to see to it that each woman is assigned to the shift which will lead to the least possible dis-arrangement of her home and social life. We owe thoughtful consideration of this problem, both to the individual worker and to the community in which we operate.

All the local plants started using women on the day shifts and the largest portion still employ them that shift. In our own plant 80 per cent work days, 16 to 17 per cent on swing, and 3 per cent on the graveyard shift.

For many obvious reasons we will continue to maintain that sort of proportion—the demands of our production organization, the natural preference of most individuals for day work, the health hazards involved in continued night shift work, the difficulty in making satisfactory arrangements for child care on night shifts.

In the first place, if other members of the family are working, all should be on the same shift. Many families have tried to arrange having mother and father work different shifts in an attempt to have at least one person at home all the time to supervise the children.

I have not known of a single successful arrangement of this sort; the results invariably mean insufficient rest for both parents, a tremendous drain on the energy of the mother who finds herself trying to work one shift and operate a home for two shifts.

War production needs have produced too much tragedy already in the loss of normal parent-child relationships. It seems self-evident that each employer must recognize his responsibility to his community on this problem. He must certainly be in a position to ascertain whether the

women on night shifts are there for the 10 or 15 per cent premium at a much greater cost to their children, or because it is a sound and intelligent solution to their home organization.

Another type of consideration which calls for careful attention is the shift placement of young single girls. Many of them take a swing or graveyard shift assignment because the only opening at the time they wanted to work was on a night shift.

In some cases the individual concerned thus loses all her normal social contacts with an ensuing disturbance of her recreational habits. This kind of thing does not produce either a stable worker or a stable citizen, and the employer is doing himself no favor by closing his eyes to the situation.

## Pre-Job Training

"Little things," such as not knowing the names of tools and being afraid of ladders, have caused such a labor turnover among women workers in the Oakland shipyards that a 40-hour job introduction training program has been instituted.

A survey in one yard of all women terminating employment revealed that in this particular yard during a three-month period, 395 women quit or were laid off; 43 per cent of them, or 172, left within one month after their employment. Of the total, 5 per cent had remained only one day or less; yet the company was put to the expense of complete hiring and termination procedures.

It was discovered that:

- (1) Many women were cleared because they were unable to meet the adjustments to shipyard employment.
- (2) The "little things" caused most of the trouble. Heavy work, the magnitude of a shipyard, housing limitations, etc., which were concerning employers, did not affect the women as much as their embarrassment in not knowing how to identify the "Boss," not knowing the names of tools, being afraid of ladders, not knowing what to do about time checks, and all the "little" items which the average workman does as second nature.
- (3) Women having pre-employment training tended to stay at their jobs longer than women having no previous training and they did not request transfers to other departments.
- (4) Of the reasons given for leaving, approximately 75 per cent could be eliminated in a pre-job training program by a job-intro-

ductory course which should give these women training to compensate for lack of mechanical and industrial background.

In a second yard where practically all women employees were hired in crafts where pre-employment training was required, turnover among women was established at 3 per cent per month.

In the classes for pre-employment training in skilled crafts, trainee mortality (based on six classes over a two-month period) was approximately 38 per cent. This high turnover resulted from the lack of adequate selection and guidance techniques for the prospective woman shipyard worker.

These surveys indicated that where pre-employment training was being used, better work was done, both the workers and foremen were more satisfied and the turnover was minimized, not only because workers were trained on their jobs, but also because within training they had been "screened." Thus the training program has been acting as a selective agent for the women.

A typical vocation included in the training is rivet passing, because the yards are requiring increasingly large numbers of women able to pass or receive hot rivets.

## Women Counselors

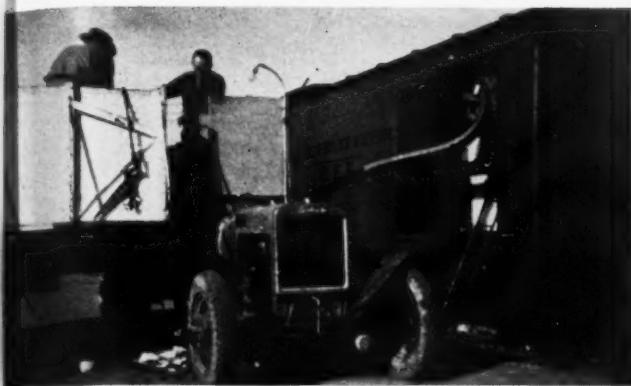
By VIRGINIA F. LEMIRE  
Assistant Personnel Director and Supervisor of  
Women, Kaiser Company, Inc., Portland

"The job of women's personnel director, and that of the women counselors whom she may supervise, is a most necessary one, from the standpoint of harmonious personnel relations, increasing the understanding and cooperation between foremen and male employees and their women co-workers, and in assisting the women to make the necessary transition from their former domestic environment to this strange new industrial one.

"The counselor, to be effective, must have a likable personality and one that inspires trust and confidence. She is selected for her intelligence and understanding of human nature, as well as for her background of experience and training. She must have the happy faculty of being able to advise without being 'bossy,' and must possess a high degree of emotional stability as well."



# WESTERN INDUSTRY IN PICTURES

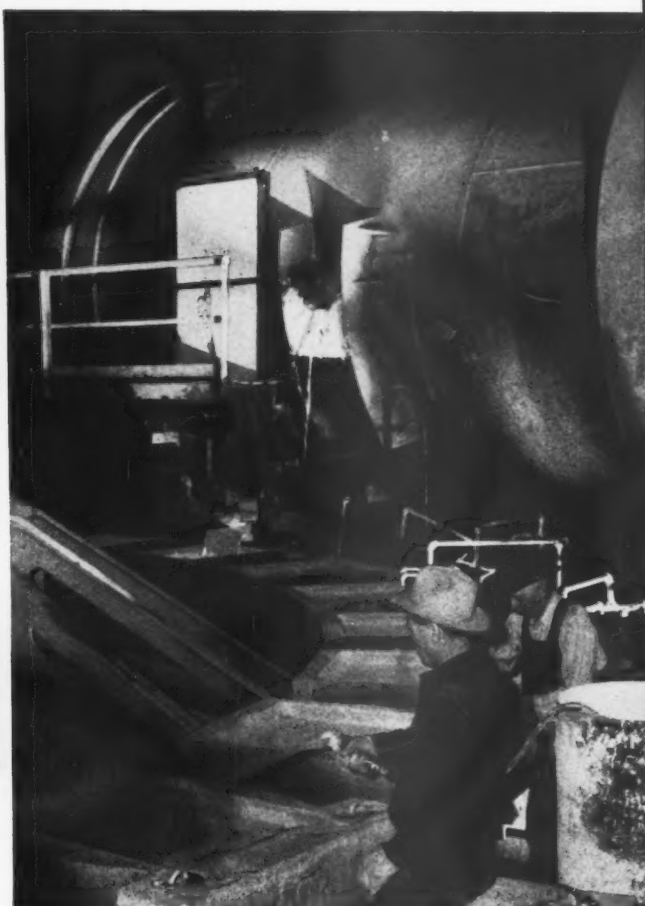


• Imperial Valley lettuce is top-iced in refrigerator cars for cross-country shipment by use of No. 310 Link-Belt ice-crusher-slinger, owned by Pure Ice Co., El Centro, Calif. It is mounted on a Buick motor car chassis to permit a 300-lb. cake of ice to be slid directly from back end of ice truck into hopper of the crusher. The resulting "snow-ice" is blown into car at 40 to 60 tons per hour, depending on the kind of power unit employed.



• Plate Shop, Oregon Shipbuilding Corporation, Portland, showing radiographs or automatic cutting torches, which run on tracks and are used to cut plates according to template needs.

• Clay, after coming from brick forming machine, is cut by piano wire into individual bricks at Columbia Brick Works, Portland.



• New copper converter casting anodes preparatory to electrolytic refining at Anaconda Copper Mining Co., Anaconda, Mont.

• The first operation in preparing plywood is stripping the bark away from the peeler logs when they enter the plywood mill. The logs are rotated against a gear-like head whirling them at a terrific speed to gouge away the protective covering.





• Recently completed drafting and engineering department in Westinghouse plant at Emeryville, California.

## DRAFTSMEN—Aptitude Tests Cut Turnover

*Exemplification of Hiring Men According to Results of Examination  
Illustrates Methods Described by Dr. Floyd Ruch in December Issue*

By GLEN GRIMSLEY\*  
Personnel Engineer, Engineering Dept.,  
Lockheed Aircraft Corporation

**D**URING the past few months, the Lockheed Aircraft Corporation has hired several hundred men and women for training as detail draftsmen in the engineering department. In general the available applicants were without either formal engineering training or experience. The only qualifications were a high school education, including algebra, and geometry, and normal intelligence as measured by the Otis Self-Administering Test of Mental Ability, Higher Examination.

The quality of trainees obtained by this method was so low as to make apparent the necessity for finding some better means of selection. Hence, after obtaining the approval of Management, research was begun in order to determine the feasibility of selecting these trainees by means of aptitude tests.

Our first step was to consult with Dr. Ruch, regarding which of the numerous standardized tests on the market would be most likely to be useful in the selection of trainees who would be successful in our particular job situation. The tests selected for trial were: (1) The California Capacity Questionnaire, (2) Minnesota Paper Form Board Test, (3) MacQuarrie Test for Mechanical Ability, and (4) the Otis Self-

Administering Test of Mental Ability, Higher Examination.

These tests were then administered to 165 previously hired trainees, and the test scores correlated with training class grades. The correlation coefficients are as follows:

Name of Test	Correlation with Training	
	Class Grade N=165	Testing Time (Minutes)
Otis Self - Administering Test of Mental Ability —Higher Examination	.15	30.
Minnesota Paper Form Board Test	.48	20.
MacQuarrie Test for Mechanical Ability (Total)	.41	11.33
Tracing	.18	.83*
Tapping	.21	.50**
Dotting	.07	.50**
Copying	.27	2.50
Location	.37	2.00
Blocks	.34	2.50
Pursuit	.35	2.50
California Capacity Questionnaire (Total)	.26	30.
Language Section	.17	15.
Non-Language Section	.36	15.

The size of the above correlation coefficients indicates the relative value of the tests in predicting class grades; however,

(\*50 seconds; \*\*30 seconds)

in selection of personnel we are not interested in predicting the exact grade of a trainee. Rather, we want to be able to differentiate between those who will be successful and those who will fail.

In order to determine which of the tests would best eliminate the failures we found the median percentile score on each test for the upper and lower quarters of the training classes. They were as follows:

Name of Test	Median %—Tile Score	
	Lower Quarter of Class	Upper Quarter of Class
Otis Self - Administering Test of Mental Ability —Higher Examination	80.0	88.3
Minnesota Paper Form Board Test	47.5	85.4
MacQuarrie Test for Mechanical Ability (Total)	54.3	84.3
Tracing	60.1	76.9
Tapping	67.5	80.4
Dotting	69.3	71.0
Copying	51.4	61.3
Location	54.0	73.1
Blocks	70.0	90.0
Pursuit	48.6	82.0
California Capacity Questionnaire		
Language Section	50.0	65.0
Non-Language Section	30.0	91.8

Three criteria were now available for the selection of our battery of tests. They were:

1. Correlation with class grade;  
(Cont'd on Page 36)

\*Paper presented at Fourth Management Conference, Southern California Management Council, on October 30, 1943.

# THOMAS TRUCK

*of Keokuk*

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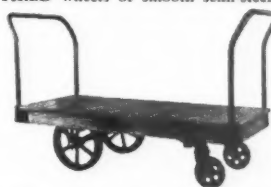
Metal and rubber and leather in a dozen types and in hundreds of sizes.

- Easy rolling tires—resilient tread
- Prevent floor damage
- Molded-on type long life
- Strong one-piece wheel casting
- Guaranteed adhesion of tire to core
- Hyatt roller bearings—Grease gun fittings
- Soft resilient tread—quiet operation
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### SERIES 3400 ROUND CORNER HARDWOOD TRUCKS

This rugged non-tilt truck is shown with Type B superstructure. It can also be furnished with any one of the more than 1000 Thomas superstructures such as those pictured around the border. Any Thomas superstructure fits any Thomas 4 wheel chassis—the combination results in a "job-suited" truck that will handle your particular load more efficiently.

Made in 10 platform sizes and 10 capacities. . . . Molded-on RUBBER TIRED wheels or smooth semi-steel.



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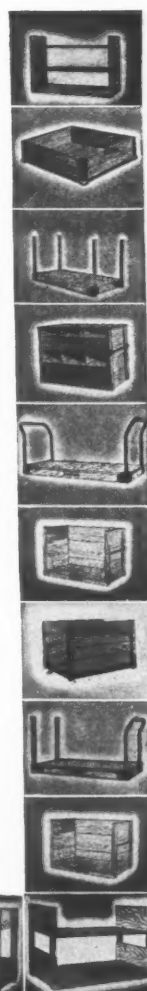
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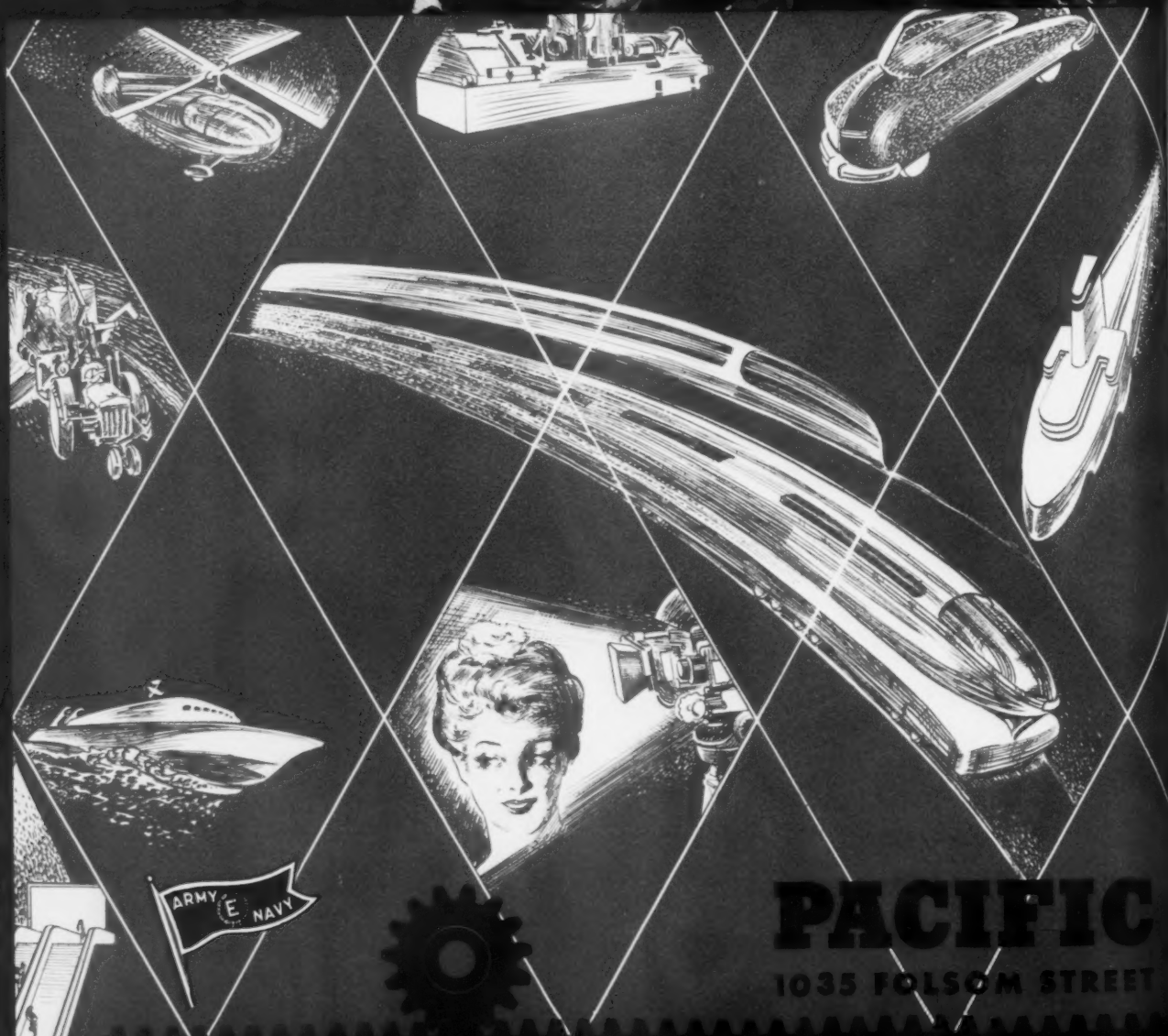
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**Destructive precision now!**



Associated Companies: • WESTERN GEAR WORKS — Lynwood, Cal.



# But useful

The big job in this war — is to win. Industry must give our soldiers the weapons with which to fight — that's the Big job now. Nothing must prevent or interfere with getting that job done.

Later, when designers' dreams start rolling off the production lines, new precision and new techniques . . . will utilize the lessons learned from the phenomenal experience of designing and producing for war.

Pacific-Western Gear Divisions, largest and best equipped plants of their kind in the West will be ready with unsurpassed facilities to manufacture anything in the line of gears and geared equipment which will be designed for peacetime living.

Perhaps you have a postwar manufacturing problem. If it involves gearing, you are cordially invited to write Pacific-Western, who are alert to the changes that must come. Their experience as leading producers of gears and gear products for both war and peace is available to all in designing for the future.

## GEAR & TOOL WORKS

SAN FRANCISCO 3, CALIFORNIA, U.S.A.

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## DRAFTSMEN (Cont'd from Page 32)

2. Difference between the median of upper and lower quarter of class, and
3. Position of median of upper quarter of class relative to median of the general population.

By means of these three criteria the following tests were selected as best serving our purpose: The California Capacity Questionnaire, Non-Language Sections; Minnesota Paper Form Board Test and three subtests, Location, Blocks and Pursuit, from the MacQuarrie Test for Mechanical Ability. On the basis of scores made on these five selected tests, standards were established for use in the hiring of trainee draftsmen.

All trainees hired were then graded as meeting one of these standards, A, B, C, D, E, or F. It was then found that among the 165 trainees originally hired, the upper half of the training classes included all A's, 89 per cent of the B's, 74 per cent of the C's, 58 per cent of the D's, 43 per cent of the E's, and 30 per cent of the F's. Stating it another way, the lower half of our training classes included no one who had scored A on our tests. It did include 11 per cent of the B's, 26 per cent of the C's, 42 per

Standards for Grading Draftsmen					
Test Grade or Standard	A	B	C	D	E
C.C.Q. Non-Language I.Q.	118 & Up	109-117	101-108	98-100	89-97
Minn. Paper Form Board	46 & Up	42-45	40-41	37-39	31-36
MacQuarrie Test for Mechanical Ability:					
Location	30 & Up	27-29	25-26	22-24	17-21
Blocks	18 & Up	16-17	13-15	12	7-11
Pursuit	24 & Up	20-23	19	17-18	16

cent of the D's, 57 per cent of the E's, and 70 per cent of the F's.

A study of 394 of the trainees which we have hired and tested shows the following losses by termination of the past several months:

A	— 7.7%
B	— 14.9
C	— 16.4
D	— 26.6
E	— 30.6
F	— 61.3

Thus those who completely failed our tests (scored F) are terminating approximately 8 times as fast as those who scored A on the tests.

Hence we are now hiring for training as draftsmen no one who scores below C on the tests. This should reduce our trainee termination rate to less than one-half of

what it has been. It is estimated that the net saving will be very substantial.

In conclusion I want to emphasize the fact that no applicant is refused employment because of a low test score. The tests are used only to determine placement. If the applicant's test results do not indicate sufficient aptitude to warrant training as a draftsman, he is offered some other type of work at which he is more likely to be successful and happy.

Thus we feel that our testing program, by aiding in better placement, serves not only to increase production to the benefit of the company and the nation, but is also of great value to the employee by helping to place him on a job at which he can be successful and happy.

# Rest of the Story On Quality Control Through Statistics

(Concluded from December issue)

THE contributions that Quality Control Through Statistics has made to manufacturing efficiency, first as regards engineering, and second in inspection, are equally if not more important than in regard to specifications which were discussed in the first installment of this article.

You will remember that we were hearing two true stories, each dealing with a prime contractor and a sub-contractor. In the first case Mr. Sub got into trouble with Mr. Prime through endeavoring to hold to a specified tolerance with rule-of-thumb spot inspection, which either failed to satisfy Mr. Prime's requirements or else ran Mr. Sub's costs up too high.

In the second case quality control was given a trial on a contract for small crews on a small aircraft sub-assembly. Both parties agreed on a usable tolerance, and Mr. Sub put an inspector on each machine until he located and corrected the causes of variation from that standard.

Written records were kept, and Quality Control Charts set up to find out what was going on in the manufacturing process. Four or five screws each were measured out of a group of samples, and averaged, each average constituting a point on the

By WILLIAM B. RICE  
Director, Department of Statistics and Reports,  
Plomb Tool Company, Los Angeles

chart. A central line constituting the average of all points was drawn and outer limits set up by a simple formula. Points within these limits were considered normal variations, while those outside were signs of something wrong.

After these bad spots had been eliminated, Mr. Sub was able to reduce his inspection to occasional sampling, a few pieces every hour or so. His rejections fell from 50 per cent before Quality Control was established to 2 or 3 per cent afterward. Mr. Prime also kept charts, and as soon as he saw Mr. Sub's charts were in control he reduced his inspections also to occasional sampling.

Now, let us go back to what I said above about Quality Control contributing as much, if not more, to manufacturing efficiency in engineering and inspection as in specifications.

Let me tell a few true stories to illustrate these points. Not long ago Mr. Prime came up for re-negotiation. When the Army was through with him and he had a chance to

sit back and view the wreckage, he decided he'd better put on his thinking-cap and see if he couldn't cut some corners this year. So he tackled his forge-shop first.

By means of quality control techniques he discovered that if the variation in size of the pieces coming off his upsetter for a shop run was .014 (from smallest to largest), about half of that, or .007, was due to heating of the steel, operator's accuracy, and other factors, and that the other .007 was due to wear in his dies.

After several experiments he set a standard number of pieces which that die should produce. In this particular case it was 20,000. Then, by keeping a simple record of the number of pieces each set of dies actually did produce before failing, he spotted and corrected several difficulties which he hadn't ever known existed.

That alone was a worthwhile saving, but he went one step further. He figured that by putting his blueprint specifications on a realistic basis, he could let his dies wear 15 per cent longer and still maintain a high quality in his product. In these days, when die sinkers are more precious than rubies, such a discovery was worth real money.

Mr. Sub, too, had his troubles. One part which he made had to be cadmium plated. His quality control charts on cad plating

would run along smoothly for several days, then suddenly would skyrocket to ridiculous heights—15 to 20 per cent bad, in every case due to excessive plating.

Since Mr. Sub practically had to sign his life away to get any cadmium at all from the WPB, he thought this outlandish behavior would bear investigation. With the clue provided by his quality control charts, he soon found out that his platers were not allowing for the decreased electrical resistance of new racks. Whenever an old rack was replaced by a new one, more current would go through and the plating would consequently be too heavy. When this was explained to the workmen, and they were instructed to check their set-up if a new rack was put in, the trouble disappeared.

Mr. Sub also found that he could use Quality Control to determine whether or not a process was really necessary. In one case, for instance, he found that he could eliminate a hot coining operation, at a saving of several thousand dollars a year. In another case he straightened out several kinks in a production line and speeded output 25 per cent simply by eliminating an inspection which, as his quality control charts revealed, did nothing to improve his product.

Speaking of inspection, you will recall that Mr. Prime and Mr. Sub were able to come to a firm mutual understanding and at the same time to cut inspection costs materially by using a scientifically designed inspection system. There is scarcely a plant in the United States which can't benefit from the application of a little science to inspection procedure.

Let me ask a few questions. Why do you do 100 per cent inspection? How much of it do you do? Does it pay its way in dollars and cents? Does it do an efficient job?

The answers may surprise you. Experience has shown that except in unusual circumstances 100 per cent inspection is generally inefficient and uneconomical.

Perhaps one of the reasons you do 100 per cent inspection is that you can't trust your process or spot inspection because 100 per cent inspection is taking all your available manpower? Has your process inspection ever been designed scientifically, with due regard to the laws of probability and engineering principles? If not, it is no wonder that spot inspection has fallen down on the job. A hand plow can't do the work that a tractor does, and similarly it is unreasonable to expect scientific results from a procedure which too often is based only on rule-of-thumb.

Lest you think this judgment too harsh, let me give you a couple of illustrations. Some years ago the U. S. Army Ordnance Department decided that 100 per cent inspection of its millions of armament and ammunition items was not successful in holding the rigid standards which the

(Cont'd on Page 38)



## 4 Ways YOU Can be a CITIZEN SOLDIER on the Job

Whether your work is in direct war service or in maintaining essential civilian activities, your primary job—and every American's—is to help win the war, *sooner*. Your personal, patriotic duty is to support our fighting forces in four vital ways:

**PRODUCE TO THE LIMIT.** American industrial genius, backing up the skill and courage of American fighting men, is the decisive factor in this war. In every daily task, you are "passing the ammunition" for a fellow-American to use.

**PROMOTE EFFICIENCY** in the utilization of machines, materials and manpower. Waste, accidents, absenteeism are saboteurs.

**PROTECT VITAL EQUIPMENT** against damage and needless wear that can slow-up production and increase material shortages.

**CONSERVE MATERIALS** and petroleum products... Oil is Ammunition—Use it Wisely. But remember, "Use it Wisely" means use it *adequately* as well as *not wastefully*. Inadequate lubrication can be the worst kind of waste.

### LET'S GET ASSOCIATED

Your Associated Representative is not only a supplier of quality lubricants and fuels. He is up-to-the-minute on wartime lubrication problems, wartime changes and developments in petroleum products. His war job is to help *you* do yours. His knowledge and training—more essential today than ever—are yours to use freely, for Victory.

ASK FOR YOUR FREE AUTO LICENSE STICKER PROTECTOR



TIDE WATER ASSOCIATED OIL COMPANY



## QUALITY CONTROL (Cont'd from Pg. 37)

Army demands. Specifically, too many bad pieces were slipping through the sieve.

For some time now they have been experimenting with a sample inspection system which has proved so satisfactory that it is now being used all over the country by the Ordnance Department's own inspectors.

They divide the defects, say in a cartridge case, into critical, major, and minor defects. Critical ones are always 100 per cent inspected. Major and minor ones are sample inspected in varying degrees, depending upon the size of the lot and the quality level desired.

The system is so simple that any inspector can follow it easily. Bell Telephone Laboratories, too, have used sample inspection for years, and very successfully, as their reputation indicates. I doubt whether

any of us can afford to ignore the question, "If the Army and Bell Telephone find it good, might it not be good for me?"

Briefly, the inspection method which the Army, the Bell System, and other organizations have found so useful, is a combination of sample and 100 per cent inspection. Let 1111 represent sample inspection, \* a trouble spot, — 100 per cent inspection, I investigation. Then the system can be described diagrammatically as follows:

1111 \* — 1111 \* — 1111 etc.  
↓ ↓  
I I

Scientific sample inspection is used until a warning of danger is given (for this purpose a quality control chart is very useful). When that happens 100 per cent inspection is immediately and automatically applied, and an investigation is started. Just as soon as the difficulty is removed, back

comes sample inspection until more trouble appears, then the procedure is repeated.

Gradually, as the wrinkles and bulges are ironed out of your processes, less and less 100 per cent inspection is required, and less and less sampling, too. When your process has in this way been put "in control," you can safely reduce inspection to a level you would not now believe possible.

## California Has Record Output

Employment in manufacturing industries in California in 1943 increased about 28 per cent over 1942, wage payments to factory workers increased 58 per cent, retail sales 14 per cent, while farm income was 143 per cent above the 1939 level and individual incomes were up 270 per cent over 1939, according to a preliminary review by the California State Chamber of Commerce.

Total employment in manufacturing industries averaged 1,100,000 compared to 856,000 in 1942 and 381,000 in 1939. Wage payments to factory workers during the first ten months totaled approximately \$2,300,000,000. Average weekly earnings of factory workers have doubled since 1939, reaching \$53.08 in October 1943 as compared to \$47.03 in October 1942.

For the first nine months of 1943, war supply contracts awarded in California totaled \$2,786,323,000, of which aircraft amounted to \$2,216,323,000.

Incomplete data indicated California's cash farm income totaled \$1,500,000,000 as compared to \$1,148,000,000 in 1942, 36 per cent above the 1942 level, as compared with an average national increase of 32 per cent.

Estimates of civilian population for California now stand at 7,600,000, a net increase of 732,000 since April, 1940, of which 412,000 was Southern California.

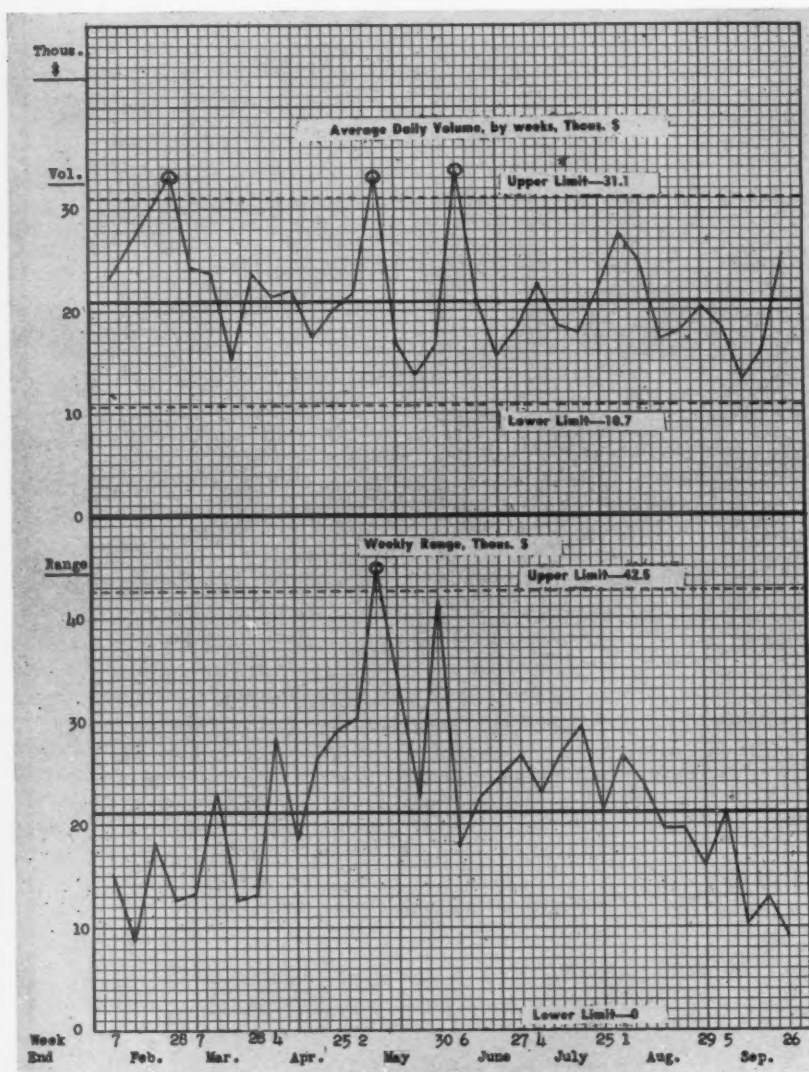
Incomes of individuals were forecast at \$11,100,000,000, attributable principally to the vast war expenditures by the national government. Of this, over \$8,000,000,000 or 72 per cent was in the form of wages and salaries.

Dollar volume of retail trade approximated \$5,000,000,000 compared to \$4,382,000,000 in 1942, an increase of 14 per cent compared to an average national increase of 8.9 per cent.

## Close Chrome Plant

The Metals Reserve chrome separator plant, near Coquille, Oregon, was ordered closed by the government, effective December 31 last.

Whether or not the closing of the separator plant will affect the Krome corporation activities is not yet known. Metals Reserve has been taking the Krome corporation's output.



• Control chart, showing production flow from plant into stockroom. Circled points are "out of control." Figures have been altered at the request of the manufacturer.



**"THIS YEAR, LET'S PAY THE BONUS  
IN WAR BONDS**



**... and drive even harder on the pay-roll savings plan!"**

Make War Bonds the Christmas Order of the Day. Urge your workers to make their personal Christmas gifts in the form of War Bonds—and practice what you preach! Make this a 100% War Bond Christmas—to insure future Yuletides of peace and prosperity.

Make up your own posters to spread the "War Bonds for Christmas" story across your plant. Tell the story again and again on bulletin boards, in your plant magazine, and on pay envelope stuffers.

But don't forget your basic, all-important Pay-Roll Savings Plan. How's it going, these days? Perhaps it needs a bit of stoking-up right this very minute, to hold its full head of steam against the competitive demands of the holiday season.

*Well, you're the man to stoke it!* You can't expect it to keep running indefinitely on last summer's enthusiasm. See to it that your participation percentages, and your deduction percentages, *both* end up the year at new levels.

Every month, now your Pay-Roll Savings ought to run well ahead of the preceding month. *For so many families that formerly depended on the earnings of a single worker, now enjoy the combined earnings of several.* Such family incomes are doubled, trebled, even multiplied many times.

Now's the time to turn as much as possible of these increased earnings into War Bonds—War Bonds for Christmas . . . and War Bonds the whole year 'round!

**GIVE THE PRESENT WITH A FUTURE—WAR BONDS!**

This space contributed to Victory by **WESTERN INDUSTRY**

*This advertisement prepared under the auspices of the United States Treasury Department and the War Advertising Council*

# Fight On to Save Western Industries

*Decentralization Committee in Congress Soon Will Be in Action, and Other Moves Pending*

By ARNOLD KRUCKMAN

**W**ESTERNERS are keenly interested in the imminent appearance of the McCarran decentralization measure which is to be reported onto the Senate floor just as soon as the Soldiers' Vote Bill has been processed. Sen. McCarran returned to Washington early in December, and moved to put the bill in action. There seems small doubt that it will be passed and that the Committee will be doing business by the first of the year.



If they do what they propose to do, the activities of this Committee should make history. As you know, the purpose of this investigation is to discover why there may be any objection to the decentralization of industry, particularly as this decentralization may help to preserve the industries that have sprung up on the West Slope with the war.

Incidentally, there is a persistent rumor here that the great steel cartel has already begun to move to place mills and fabricating plants in Cuba, in order that the cartel may have a producing center at a strategic spot to supply Asia, South America, the West Coast, and other sections of the globe. Washington is a regular breeding ground for rumors, and we are generally inclined to discount most of them. But this particular rumor apparently is given credence by some sober and responsible quarters here, and for this reason seems worthy of report.

If there is a basis of fact behind such rumor, this is the kind of information it is reported the McCarran Committee wishes to obtain. The usual hearing in Washington, or elsewhere, by a Congressional committee, frequently is interesting as a debate, and headline utterances; but the hearings often are barren of many genuine facts.

In order to get down to real brass tacks it is the intent of those who have sponsored the McCarran Committee to use, if necessary, the Congressional power of subpoena, and to bring into the open the records of the WPB and other war agencies to find out some of the things that are very puzzling.

The relationship that has grown up be-

tween a Government bureau or office and the Congress during the last decade or so has apparently placed the Government bureau in the position of a prophet on the mount of who didactically tells the Congress what the bureau thinks the Congress should do, reversing the true relationship of the Congress and the creatures it has brought into being.

It apparently is the intent of the McCarran Committee to make an effort to put the administrative bureaus and agencies in their places, and to insist that they supply all the facts, not half-truths which they often are accused of furnishing in many instances. The difficulty of securing clear, complete information from Government agencies has aroused considerable feeling among several industries and regions. The lack of dependable information has prevented some industries and some places from making the plans that might save them from troublesome results.

The confusion about manpower, about materials, and about allocations and distribution, apparently cannot be clearly explained by the bureau and divisional chiefs of WPB. These chiefs frequently declare they are not permitted to give the full facts. It apparently will be the effort of the McCarran Committee to find out why the facts may not be made available. This will take the investigation to the highest figures in the hierarchy of WPB, OPA, WMC, ODT, and the rest of the agencies; and it may bring their records into Congress.

## Saving Coast Plants

Meanwhile various members from the West are moving to save something for the West Slope when the reconversion really begins. Late in November Rep. Cecil R. King, 17th District, California, which is one of the Los Angeles areas, introduced House Concurrent Resolution 58, which would declare it to be the policy of the Government and all its parts that in reconverting from war production, or in allocating materials or facilities for civilian purposes, or in disposing of factories, plants, and other property used for the war.

Government is "to proceed and act in a manner which is consistent with the great-

est possible measure of equity as regards the respective interests and welfare of the various regions of the United States." This resolution very obviously is slanted to give the West Slope an opportunity to share in the nascent development brought by the war. It is interesting to watch what the Congress will do with the resolution.

Curiously enough, few, if any, of the civic or commercial associations of the West Slope have put themselves flatly on record as approving this measure. Many of them may not yet know it has been introduced. But some of the chambers of commerce with the largest membership rolls definitely know the resolution has been offered, and their representatives here have confined their interest to a promise to "look into it."

It is the misfortune of the Pacific Coast and the West Slope that it is represented in Washington, in some instances, by employees of civic and commercial organizations who play their cards so close to their chests that they give the impression their organizations are interested solely in the limited, specific desires of a relatively limited group. This self-centered attitude naturally discourages a broad statesmanlike point of view by the men in Congress, who are able to see the scope of the West Slope as an effective unit in post-war planning.

Reconversion Plans  
Men like King, and Rep. Jerry Voorhis, another member from the Los Angeles area; and men like Rep. Fred Norman of Washington, are aware that some units of WPB already are actively planning reconversion of some plants for civilian production. In the large, however, it is fair to explain that Government has not yet defined a clear and specific reconversion and post-war program. Many plans there are, some more specific than others. Some of those most forward probably are actuated by a sincere desire to come to the rescue of the consumer, and others are designed to place the particular agency in

## Reconversion Plans

One of the best-informed writers at the Nation's Capital, Arnold Kruckman, presents each month authoritative comments on political developments and their practical application to industry of the West. Any reader who wishes additional information may write to him directly, using business letterhead, at 1120 Vermont Avenue, N.W., Washington, D.C. Inquiries will be answered free of charge. You also are invited to contact him personally in Washington. Copies of pending congressional bills may also be obtained free of charge.

a preferred position for the job of directing and administering the post-war program.

There is much urgent competition here among the great war agencies for first place in the post-war picture. Their war jobs seem to have slackened. They are probably doing well over 50 per cent less work than they did last summer.

If they cannot find a good reason it will be difficult for these agencies to perpetuate their existence. It is natural they should wish to keep the Government jobs. And it is therefore logical they should wish to take over the work of planning our post-war business and life.

OCR has been most forward in direct plans for reconversion of some plants. The most pressing need apparently is for washing machines, electric irons, and other electrical household equipment. There also is need for stoves, and for the regulating appliances that are attached to warm air furnaces. There is said not to be such urgent need for reconversion of plants which make heating equipment because this industry has generally been a depressed industry, with plants idle.

The plants which make washing machines and electric irons have largely been converted to war work. It is reported there is pressing need for 1,000,000 washing machines, and for 2,000,000 irons. OCR called the industry representatives into several conferences to discuss reconversion.

OCR is definitely the planning and programming agency, at this stage of affairs. A blueprint was made which apparently met the approval of the industries. The program then went to the plumbing and Heating Division of WPB. It will be the task of this division to administer the operation of the reconverted industry, and to allocate materials and labor and other facilities.

#### Control Will Continue

It should be marked that apparently the Government agency, at least at this stage, will have a tight control over the operation of the reconverted plants. Prices naturally, will come under OPA; and manpower under WMC. It is reasonable to assume this pattern is a forecast of the manner in which the actual post-war system may operate. No one knows yet whether or not we will have controls over our business and our social life after the war, but it seems likely something like this will obtain.

At this writing the program proposed by OCR is undergoing further study by the Plumbing and Heating Division of the Durable Goods Bureau of the WPB. From this division it goes to Smaller War Plants Corporation which also has a hand in allocating materials and facilities to industry.

(Continued on Page 42)



## HELP PREVENT DERMATITIS

### ... AND SPEED PRODUCTION

Occupational skin diseases are a major cause of time lost from work in industry.\* The millions of men and women whose skin must necessarily come in contact with chemicals and other irritants in the course of their work are learning that certain precautions are necessary.

West supplies industry with these products and many others designed to fill virtually every demand of modern industry for healthful cleanliness.

All authorities agree on the importance of personal cleanliness and some authorities go so far as to state that 90% of all occupational skin diseases could be prevented by proper personal cleansing methods. Tested in the fire of war-time necessity, Lan-O-Kleen has proven to be the most satisfactory hand cleaner ever used in many of our greater war plants.

The story of Lan-O-Kleen therefore should be of paramount interest to industrial physicians, safety engineers and plant managers everywhere.

\*Proven by independent scientific research.

• Send for your copy of this booklet

# WEST

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## KRUCKMAN (Continued from Page 41)

After the plan passes study in this agency it goes, with its schedule of needed materials and facilities, to the WPB Requirements Adjustment Committee. This is the high court where they decide whether or not you will get what you think you need. After it has passed this committee it goes to the ultimate all-highest of WPB. Whoever functions in this place can stop it, if he so desires.

As a rule at this stage the recommendations of those further below are, accepted and approved.

They think here that this particular program will be clear by February, possibly March. This naturally means it will be well into summer before the actual product may reach the retail distributor. The picture as given is important because it may help you understand what really may happen, and when it may happen, whenever you read that WPB has released materials and has cleared a project for some civilian product.

Out on the West Slope you naturally will be interested to know whether or not plants out there will be permitted to engage in civilian production, even if they are engaged in war work. OCR and WPB and SWPC have had many protests from Western manufacturers who fear that earlier production for peace usages in the East will rob the Western producer of his eventual opportunities, and his market.

There is no doubt the Western producer is expected to remain at war production. Obviously he is much closer to the field of operations where war products will be needed, and he is located where he may help to save time and space and facilities in transportation.

Transportation is expected to be as much of a problem as manpower. They are talking about embargoes on westbound freight when they do not talk for publication. However, OCR has given much thought to the problem of the Western manufacturer who is shut out from the earlier peacetime market.

It has been suggested that the permission to produce washing machines and irons, for instance, will be gauged on the basis of the volume of production when WPB stopped the factories. The plan is to supply the materials, and to permit production pro rata in proportion to the number of washing machines and irons manufactured and distributed when the embargo against production was laid down. It is also proposed that the plants on the West Slope shall be permitted to make a token production.

### West Not Protected

This system is expected to keep the brand and the type and the name of the manufacturer before the Western buyer. However, no one has yet found a way by

which the Western manufacturer may be protected against the invasion of his market by the goods made in the East while the Western manufacturer still is compelled to devote his energies and facilities to war products. OCR and WPB invites any suggestions which may help the Government to do justice to the consumer, to the Western producer, and to the Eastern manufacturer.

Privately, on the Hill, we hear that in almost every area of the Pacific Coast business has recently slowed down. Naturally it is attributed to the manpower trouble and the cancellation of some contracts. However, WMC asserts there has been very little cancellation on the West Coast. It places much emphasis on the fact that it has been able to get control over labor hoarding.

Bear in mind, if you feel like protesting, this is a report of what the WMC people say, it is not the conclusion reached by this reporter.

The mandatory use of USES is not very popular here. Labor generally fears that this agency, a part of WMC, may greatly reduce the function of the labor unions after the war. The unions expect to lose great numbers of the members, and USES expects to be the broker for those who seek work after the war. The "locally needed" system, which is the egg from which the West Coast plan was hatched, has lately come in for much criticism.

In some industries, such as the laundries in San Diego and Sacramento, WMC does not seem able to come to an understanding

with the National War Labor Board. The WLB fixes a maximum and a minimum wage schedule. When there is such range it is legal for the employer to pay the lower if he chooses to do so.

As a matter of fact, WLB is supposed to feel the lower wage rate is preferable, because it was set up in order to keep down the rising cost of living. WMC, on the other hand, insists upon the highest wage rate. It has no actual authority to impose the higher wage rate, but it can withdraw the benefits of the "locally needed" classification, and in many places this would mean the employer could not secure help, nor hold the help is his employ.

Many laundries have unwillingly raised wages; it is reported some have closed. Similar pressure has been exerted upon other industries. It is interesting that there is no specific law or regulation behind these pressures. Compliance is secured by negative means.

Here in the East some aspects of the WMC program are not very popular. The compulsion to use negroes and others classified as minority groups is not always consistent with the habits of the industry. The general opinion here is that WMC, at least in its "locally needed" relations, definitely is operating more as a social reform agency than as a Government war unit.

The gentlemen who administer the "locally needed" program have long told any one who cared to listen that they feel industries such as laundries, barber shops, and similar service facilities, should be made public services.

• **INSULATING MATERIAL MINE.** When the war came on, the two Alexander brothers of Colorado Springs, J. Don and D. M., who have built up a large advertising film studio, went prospecting in the Rockies for strategic materials, and this mine at Powderhorn is the result. From it comes a new non-metallic mineral they have named AleXitE, which they process at Colorado Springs into a loose fill heat and sound insulating material that pours like popcorn. Also is used for cement tempering.





## Electricity Not Industry Cornerstone

Industrial development in the Pacific Northwest in the post war period cannot be predicated on the basis of an abundance of electric power, according to J. E. E. Royer, vice-president and general manager of the Washington Water Power Company of Spokane.

Speaking at the annual fall meeting of the Washington State Chemurgic Committee at Spokane, December 3, he said the cost of electric power is not an important factor in most manufacturing operations. Electro-chemical industries he declared were about the only ones in which the cost of electric power is important enough to determine the location, and even with free electricity, other factors are of equal or greater importance, such as distance from raw material, market and freight costs on raw material and finished products.

The electro-metallurgical plants now operating in the Pacific Northwest, which use vast quantities of electric power, were brought to the region to satisfy war needs, according to Royer, and are more likely to remain if an all-around industrial program can be developed to complement them.

Costs of electric power per \$100 of finished product for industries dependent to a large extent on electricity he gave as follows:

Aluminum .....	\$30.00
Zinc, electrolytic .....	18.60
Ice .....	17.20
Sodium .....	19.40
Chlorine and caustic soda .....	13.30

For most manufacturing operations, he quoted the following figures from the U. S. Bureau of the Census, showing that the cost of electricity in the average manufactured article is less than \$1 for every \$100 worth of goods manufactured, and that a saving of 1½ per cent in the cost of materials and containers would more than pay the cost of all the electricity used:

Materials and containers .....	\$53.40
Wages and salaries .....	22.60
Commission and contract work....	1.04
Fuel .....	1.50
Purchased electric power .....	.82
Taxes, overhead expense, profit....	20.64

"The proof is in the record that mere bulk power—an abundance of just plain kilowatts—is not a factor in industrial development. Those who hold this theory point to the Tennessee Valley Authority and say that it has caused great industrial development in the TVA region.

"The facts do not support that statement. The 1939 Blue Book of Southern Progress shows that for the year 1938 the money invested in new factories, plants and additions to existing plants in the nine southern states amounted to \$79,000,000. Of the nine states, Tennessee, the home grounds of the TVA was at the bottom of the list with only \$548,000, about one-half of one per cent! Virginia was at the top with \$26,939,000."



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# WESTERNERS AT WORK...

## Arizona

R. Douglas Maw, former resident manager, Hemet, Calif., base of Ryan School of Aeronautics, has been transferred to Tucson as manager. . . William Kuchar, Safford, has been appointed deputy state mine inspector in the Globe-Miami district succeeding J. Clint Anglin, Globe, who resigned in order to devote full time to development of his mine at Aravaipa. . . Dr. G. M. Butler, dean of the University of Arizona College of Engineering, Tucson, has been named an educational consultant by the Ninth Service Command, U. S. Army. . . William H. Munds, former assistant manager at Molybdenum Corp. of America's Boriana mine at Yucca, has gone to Washington, D. C., to take over duties with U. S. Bureau of Mines. . . Louis O. Fiscel, Pinal County engineer, has been appointed city engineer for Tucson. . . Henry S. Wright, Arizona business man, has been appointed chief deputy regional director for WPB.

## California

Fred A. Weller, San Francisco, has been appointed regional Pacific Coast attorney for the Office of Defense Transportation, handling enforcement work in California, Oregon, Washington, Nevada and Arizona. . . Colonel Alexander R. Heron, former vice-president, Crown Zellerbach Paper Company, has been appointed director of the State Post-War Planning Committee. . . Louis Campiglia, presi-

dent of California & Hawaiian Sugar Corp., has been appointed to the national cane sugar refining industry advisory committee.

H. C. Davies, president, California Spray Chemical Corp., Richmond, has been named to the agricultural insecticide and fungicide industry advisory committee by OPA. . . Lawrence R. McNamara has been promoted to assistant district manager of Los Angeles District Office of ODT's Division of Motor Transport. . . John R. Baier has been made personnel manager, Thompson Products, Inc.

Ernest P. Marsh has been appointed regional director in the eleven Western States, of Conciliation Service, U. S. Department of Labor.

Kenneth T. Norris, president, Norris Stamping and Mfg. Co., Los Angeles, has been chosen on President Roosevelt's new industrial advisory committee. . . E. H. Hammond has been appointed manager, industrial department, Oakland Chamber of Commerce. . . F. A. Lauerman, Director of Industrial Relations, Consolidated Vultee Aircraft Corp., San Diego, has been elected member-at-large of the National Safety Council.

## Colorado

E. G. Plowman, traffic manager, Colorado Fuel and Iron Company since 1937, has been appointed vice-president in charge of traffic for United States Steel

Corp. of Delaware, and Ward Wick, vice president Colorado & Wyoming Railroad, has been named traffic manager Colorado Fuel & Iron Company. . . John W. Gabelman has joined staff of Empire Zinc Division of New Jersey Zinc Company as junior engineer at Gilman. . . Harry E. Jones, has been appointed chief engineer, The Mountain States Telephone and Telegraph Company.

## Idaho

W. H. Simons has become manager, Sunset Lease, Wallace. . . J. F. Huston has been appointed managing director of the Lynch-Pine Creek Mining Company's property, Kellogg.

## Montana

Walter R. C. Russert of Anaconda Copper Mining Company staff, Butte, has been promoted to assistant general superintendent in charge of the Orphan Girl, Emma, Travonia and Oriental mines. . . R. H. Willcomb has been appointed maintenance engineer State Highway Department. Willcomb's old job of highway department division engineer at Lewistown has been filled by John McGhee, promoted from resident engineer. . . Prof. A. E. Adami has been appointed dean of the Montana School of Mines.

## Nevada

Elton Clark, Jr., Mills City, has joined staff of U. S. Smelting Refining & Mining Company in Utah. . . James Hunter has



• UTAH STEEL MEN—Officials of Geneva Works. Standing, left to right: J. Wohlwend, treasurer; Merrill Russell, secretary; J. R. Gregory, vice president of sales. Seated, left to right: Clifford G. Strote, purchasing agent; ROBERT G. GROSS, vice president and manager of operations; Walter Mathesius, president; and Peer D. Nielsen, general superintendent.

## WESTERNERS AT WORK (From Pg. 44)

been appointed mine superintendent of the Red Bird Mine of the Harold's Club Mining Company near Lovelock, Nevada. . . . W. S. Eddelman, Jr., has become supervising engineer in Nevada for the mining section of the RFC, Reno.

### New Mexico

A. L. Mason has become actively engaged in the Indian Metals Company's fluorspar mine near Lordsburg. . . . K. C. Kartchner has been named Regional Inspector in regional office of U. S. Fish and Wildlife Service, Albuquerque. . . . Hugh M. Henton, assayer for U. S. Smelting Refining and Mining Company, Silver City, has gone to a new position with North American Aviation, Inc., Dallas.

### Oregon

Paul Hirsh, Portland, has been appointed deputy regional director, WPB, for 13th region, composed of Oregon, Washington, Northern Idaho and Alaska. . . . F. W. Shepard has been appointed manager of the new Sick's Brewing Company, Salem. . . . Aubrey M. Collis, former Federated Metals manager, Portland, returns to Pacific Coast as assistant general manager, Federated Metals Div., American Smelting & Refining Company. . . . Robert R. Taylor has become general agent of Western Pacific Railroad, Klamath Falls, succeeding H. Ray Coulam. . . . Bert C. Mills, Portland manager for Shell Oil Co., Inc., has been promoted to service manager for Shell at San Francisco. Mills' old job is being taken by Maxwell K. Lakin, former Shell local manager at Tacoma. . . . Milo L. Tally has been named assistant to application data manager for Pacific Coast District, Westinghouse.

### Utah

Stanley J. Stephenson, Salt Lake City, has been appointed industry member of Ninth Regional War Labor Board. . . . Judge Dallas H. Young, Provo, has become hearing commissioner for OPA in Utah, Idaho and Montana. . . . Willard Richards, traffic representative, Rio Grande Motorway, Inc., has been named chairman and Charles B. Petty, Petty Motor Co., vice chairman, of the highways committee of the Salt Lake Chamber of Commerce. . . . Dr. Fred F. McKenzie, head of animal husbandry department, Utah State Agricultural College, has become director of livestock research for Superior Products Co., Golden, Colorado. . . . C. W. Davis, Salt Lake City, has been appointed district sales manager, General Foods. Position was formerly held by Harold Aughtry who has been transferred to Austin, Texas, as district representative.

## Washington

C. Ivan Jamieson, comptroller, Bellingham Marine Railway & Boatbuilding Company, has been promoted to the position of assistant general manager. . . . O. D. Fisher, Fisher Flouring Mills Company, Seattle, has been appointed to the flour milling industry advisory committee by OPA. . . . Rudolph W. Anderson, Spokane, has been transferred by the Aluminum Co. of America to Troutdale, Oregon, to be superintendent of the Mechanical Department. . . . Peter G. Schmidt, president Olympia Brewing Co., Olympia, has been appointed to the OPA national brewing industry advisory committee.

Gene Keller, president of Vancouver

Chamber of Commerce has been appointed to the Vancouver Housing Authority. . . . J. L. Bridge, Seattle; A. Z. Morgan, Forks; L. T. Murray, Tacoma; Arnold Polson, Hoquiam; have been appointed to the Northwest logging advisory committee by OPA. . . . Jack R. Rehm has become treasurer; M. M. Pattison, secretary; T. R. Anderson, comptroller; and Russell Austin, sales manager, of the Plywood Corporation, Hoquiam.

## Wyoming

J. P. Walker of the Bureau of Mines has been transferred to Laramie as metallurgist for the new sponge iron plant of the Bureau.



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## Port Orford Cedar Control Proposed

Issuance of a WPB order controlling Port Orford cedar was recommended by industry members at the first meeting of the Industry Advisory Committee on November 22. The need for such an order, which would be administered by the Western Log and Lumber Administrator from Portland, Ore., was discussed in detail. The following facts were brought out:

The supply of Port Orford cedar, which is the best species of wood available for battery separators is limited. It is therefore necessary to make certain that logs and cants, separator blanks and finished separators of Port Orford cedar are channelled

into the most essential military and civilian uses—batteries for military equipment, power stations, and war plant vehicles.

Among alternative species that may be used for comparatively less essential uses are Douglas fir, redwood and poplar. Lend-Lease requirements for separators are heavy and are fairly definitely known. Domestic requirements are not so definitely known at present.

Committee members suggested that Lend-Lease specifications be made less rigid and that Lend-Lease export of logs, cants and lumber be drawn as far as possible from manufacturers not making finished separators. Shipments of logs and cants, it was pointed out, make it pos-

sible to manufacture the separators abroad to fill specifications that change with the changing conditions of military activities.

Those present at the meeting were: Edward J. Fishbaugh, Government Presiding Officer; Frank Freeman, West Coast Separator Company, Los Angeles, Calif.; Ernest Harrington, Port Orford Cedar Company, Marshfield, Ore.; Harry Jameson, Arrow Mill Company, Chicago, Ill.; Fred W. Payne, Western Battery Separator Company, San Francisco, Calif.; R. M. Singer, Evans Products Company, Los Angeles, Calif.; Paul Speyer, Standard Battery Separator Company, Los Angeles, Calif.; George Ulett, Smith Wood Products Company, Coquille, Ore.

## West to Get Faster Conciliation Service

Dr. John R. Steelman, Director of the United States Conciliation Service, has announced the decentralization of the Service's West Coast region. Commissioner Ernest P. Marsh, who throughout the years has built up a reputation for success as a mediator, has been appointed Regional Director, with headquarters in the Phelan Building, San Francisco.

Heretofore it has been necessary for employers to wire or telephone Washington, reporting a dispute and requesting the assignment of a Commissioner of Conciliation. As of November 15, the 38 commissioners in the eleven Western states have been made available through the San Francisco office. Conciliation Service offices are to be maintained in Denver, Seattle, Portland and Los Angeles.

## Kenworth Opens at Yakima

Kenworth Motor Truck Company of Seattle have been awarded a new truck contract from army ordnance and will move this part of their operations to Yakima. Manufacture of the trucks and repair parts will carry them through 1944, while their present plant in Seattle will be used for repairs and parts for civilian trucks and for aircraft sub-assemblies for Boeing. About 150 persons will be employed at Yakima.

## Bigger Rubber Factory

United States Rubber Company has begun an expansion program at its Los Angeles plant that will almost double present capacity and will entail expenditure of almost \$2,000,000. The new machinery includes Banbury mixers, calenders, tire building machinery, mixing mills, carcass fabric builders and vulcanizers, and will permit the manufacture of airplane and heavy duty truck tires as well as passenger tires.

## Richfield Expansion

Richfield Oil Company has 1500 men at work at Watson, constructing new facilities for production of aviation gasoline which will eventually represent an expenditure of \$25,000,000.

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## New Rubber Products From Arizona Project

Among the post-war possibilities under development at Goodyear Farms, a 35,000-acre project near Phoenix, Ariz., by Goodyear Tire & Rubber Company, are the following:

A pre-fabricated, portable house, 184 feet by 27 feet, that can be telescoped into a width of 7 feet, 11½ inches, to be hauled along the highways.

"Balloon" grain storage bins, 29 feet in diameter and 14½ feet high, made by inflating a half-balloon of rubberized fabric, laying chicken wire over it and applying two layers of plaster over the wire. After the material has hardened the balloon is removed from the inside.

"Igloo" homes similarly made, of one dome or two domes joined with a corridor.

Pliofilm plastic containers for marketing farm products, as a substitute for tin and glass.

A mechanical cotton picker.

Tractor tires, filled with water instead of air as a means of prolonging their useful life.

## Discoveries In Alloying Steel

Hardness of steel will in the future be the basis for purchasing, instead of specific alloys, since it has been discovered that all alloying elements have the same hardening effects, according to D. D. Barbour, assistant chief metallurgist of the Kaiser Corporation.

Two other notable discoveries have been made in recent research, he said, (1) a new alloying element, boron, which insures an astonishingly tough steel; (2) by increasing the number of times that high speed tool steel can be tempered, it is found that the life of such steel can be increased 20 to 500 per cent.

Boron was revealed as an alloying element when it was found that steel with too much boron cracked easily. Reducing the quantities of boron produced an alloy steel 600 times tougher than nickel alloy and 150 times tougher than chromium.

## War Veterans Being Rehired

War veterans are now being discharged from California hospitals at the rate of 4,000 a month, and are either returning to their old jobs or taking vocational training. The Selective Service Act requires employers to put back on the payroll former employees returning from war service provided they request employment within 40 days after discharge.

Many employers are reported by War Manpower Commission to be going beyond the letter of the law and permitting boys suffering from what is called "war

weariness" or "occupational fatigue" and who cannot work under tension or amid great noise to take other jobs for the time being and promising these former employees their old jobs if and when they are able to handle them.

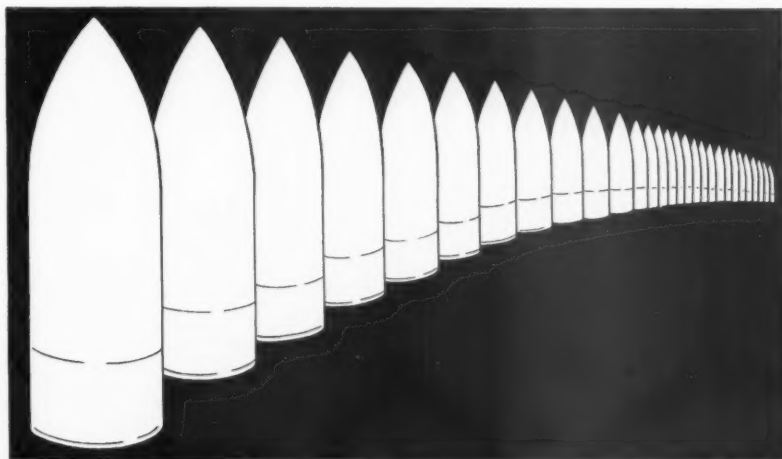
## Another Magnesium Source

Preparations are reported to have been practically completed by Idaho-Maryland Mines Corp. at Grass Valley, Calif., for construction of a plant to extract magnesium from serpentine. The company will use the Brandenburg process. Numerous tests of serpentine deposits available in local properties owned by Idaho-Maryland

Mines indicate that the material may yield 300 pounds of magnesium oxide per ton. Brandenburg says his process will produce the metal at a cost varying from 12 to 15 cents per pound.

## Operations Reduced

One-sixth of the civilian employees at McClelland Field, Sacramento, an airplane repair and supply depot, or about 2500, have been dropped from the payrolls, in line with a nationwide manpower retrenchment program. The Denver ordnance plant also is reducing its output, as a result of the army having accumulated such a large supply of ammunition.



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# THE WESTERN OUTLOOK...NEWS...STATISTICS...

## THE PICTURE

War production continues at same high peak, cancellations or cut-backs being offset by new contracts. Transfer of contracts for 13 destroyers, cruisers and fleet tugs to the East Coast offset by repair work, for landing craft, Victory ships, etc. Ship tonnage off because of more difficult type of work than quickly assembled Liberties.

Steel is in great oversupply except for ship plates and redistribution division of WPB is starting to move \$90,000,000 worth of surplus steel from the aircraft industry, as a result of changes in specifications and overbuying by the industry. Consequently new steel mill at Utah will not be allowed to complete the merchant and structural facilities, for the present, at least, and it is reported same treatment will be accorded to the Kaiser mill at Fontana.

Six-day week in shipyards will eliminate much overtime, reducing payrolls and thus affecting retail buying.

## LUMBER—Upward Demand

A strong recovery in the summer and fall from the most severe winter in 1942-1943 of recent years brought the total of West Coast lumber production for the first 47 weeks of 1943 up to only 10.3 per cent below the comparable period of 1942. This was despite the fact that manpower in the woods was short more than 25 per cent. There is no immediate prospect of a letup in war demands for West Coast lumber, according to the West Coast Lumbermen's Association. Weekly average production in November was 106.8 per cent of the 1939-1942 average.

Cumulative figures for 47 weeks are as follows:

	1941	1942	1943
Production .....	7,921,258	7,915,958	7,181,598
Orders (net) .....	7,912,918	9,323,744	7,601,942
Shipments .....	7,965,410	8,546,225	7,352,112

## AIRCRAFT—Output Climbs

November output of West Coast aircraft plants was 2,581 warplanes, a gain of 85 over October, when the production was 2,496. Some 600 of the November planes were four-engine bombers, or 60 per cent of the national produc-

tion. Warplanes are coming off the West Coast assembly lines at the rate of nearly 100 a day, or one every 15 minutes during the 24 hours.

## SHIPS—Leveling Off

For the first eleven months of 1943, Pacific Coast shipyards built 843 ships on Maritime Commission contracts totalling 8,457,000 deadweight tons. August was the high production month for the eleven months.

(Includes destroyer escorts and small aircraft carriers, but not larger naval vessels built by the navy itself. Also includes concrete barges, but not tugs or wooden barges. Tonnage figures from September on are adjusted, previous months unadjusted. Deadweight tons are used as a rough measure of the cargo carrying capacity of the ship. All figures from U. S. Maritime Commission statistical department.)

	No. of ships	Thousands of deadweight tons
January .....	54	530
February .....	70	641
March .....	80	772
April .....	78	792
May .....	84	816
June .....	81	869
July .....	85	844
August .....	80	989
September .....	80	838
October .....	76	787
November .....	78	776

## EMPLOYMENT—August Was Pacific Coast Peak

Estimated Number of Employees in Non-Agricultural Establishments—In Thousands—Source: U. S. Bureau of Labor Statistics

ALL INDUSTRY DIVISIONS																			
—Montana—		—Idaho—		—Wyoming—		—Colorado—		—New Mex.—		—Arizona—		—Utah—		—Nevada—		Total Mount'n			
1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943		
January	113	110	88.9	105.0	54.0	57.0	249	288	73.6	80.3	99.5	111.7	131	182	36.0	43.8	845	978	
February	112	110	89.4	106.3	53.5	57.8	251	278	74.9	79.5	99.4	112.6	131	174	35.9	45.0	847	965	
March	112	110	90.2	101.9	54.2	58.6	256	281	81.3	78.6	100.3	112.2	139	173	37.1	48.3	870	964	
April	113	110	92.5	104.3	55.2	59.0	260	282	87.0	78.9	111.1	114.1	146	171	37.7	47.1	903	966	
May	116	111	95.5	106.6	58.1	60.5	269	280	84.1	78.3	110.3	118.9	155	173	39.0	47.4	927	976	
June	114	112	94.1	101.3	59.3	61.4	276	285	79.2	79.1	110.2	116.2	164	173	37.4	47.3	934	974	
July	114	112	97.0	100.4	61.2	61.0	300	284	81.5	81.8	106.1	112.4	165	180	37.8	44.8	963	976	
August	119	113	118.7	98.4	63.7	61.9	308	287	87.8	83.2	113.1	108.7	180	178	39.5	41.9	1,030	972	
September	118	115	124.0	102.0	66.5	62.1	318	290	84.7	80.7	113.0	107.6	193	175	43.9	44.0	1,061	976	

## MANUFACTURING

	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943	1942	1943
January	15.0	15.1	11.6	11.8	4.0	3.7	46.7	66.5	4.8	4.4	8.4	12.7	20.7	30.8	1.5	1.7	113	147
February	14.7	14.5	11.8	11.9	4.0	3.7	49.5	64.2	4.9	4.5	8.7	12.8	20.9	30.6	1.5	2.0	116	144
March	14.6	14.3	11.8	11.8	3.9	3.7	52.1	63.4	5.0	4.5	9.2	12.6	23.8	30.5	1.5	4.2	122	145
April	14.7	14.2	12.3	12.2	4.0	3.7	54.7	63.9	4.7	4.4	10.2	12.5	27.3	31.2	1.6	4.5	120	147
May	14.9	14.2	12.5	12.4	4.2	3.7	56.1	64.0	4.6	4.2	10.1	13.8	29.9	30.8	1.5	4.9	135	149
June	15.1	14.4	14.7	14.0	4.3	3.8	58.7	65.0	4.4	4.5	10.3	13.1	32.3	33.7	1.5	5.5	141	154
July	15.3	14.5	16.5	15.2	4.4	3.9	61.6	67.0	4.3	4.7	10.2	13.5	38.6	40.4	1.6	5.2	154	164
August	16.1	15.2	...	14.2	4.8	3.9	62.3	67.0	4.6	4.6	10.4	13.4	37.2	36.9	1.6	5.0	153	160
September	15.7	15.2	18.2	15.8	4.8	3.9	66.3	68.5	4.6	4.3	10.4	13.2	37.9	35.8	2.5	5.1	160	162

## ALL INDUSTRY DIVISIONS

		—Washington—		—Oregon—		—California—		TOTAL PACIFIC	
		1942	1943	1942	1943	1942	1943	1942	1943
January	522	638	292	339	2,232	2,611	3,046	3,588	
February	535	634	301	341	2,229	2,642	3,065	3,617	
March	544	646	325	348	2,248	2,663	3,117	3,657	
April	565	648	350	349	2,298	2,685	3,213	3,682	
May	583	643	339	351	2,327	2,694	3,249	3,688	
June	602	655	356	361	2,367	2,726	3,325	3,742	
July	627	673	387	362	2,485	2,734	3,499	3,769	
August	638	665	363	361	2,558	2,776	3,559	3,802	
September	653	675	381	362	2,573	2,717	3,607	3,754	

## MANUFACTURING

		—Washington—		—Oregon—		—California—		TOTAL PACIFIC	
		1942	1943	1942	1943	1942	1943	1942	1943
January	182	259	110	145	661	1,002	953	1,406	
February	188	255	114	145	683	1,022	985	1,422	
March	192	257	121.6	147	696	1,036	1,011	1,440	
April	197	256	129.6	147.2	736	1,052	1,063	1,455	
May	205	255	131	148	758	1,050	1,094	1,453	
June	219	263	139.8	153.7	789	1,061	1,148	1,478	
July	235	274	148.4	157.3	860	1,080	1,080	1,511	
August	251	271	150.4	157.9	928	1,142	1,329	1,571	
September	266	279	160.5	161.3	946	1,088	1,373	1,528	

## ELECTRIC ENERGY—Continued Rise in Manufacturing Areas

Production of Electric Energy for Public Use—In Thousands of Kilowatt Hours—Source: Federal Power Commission

	MONTANA	IDAHO	WYOM.	COLO.	NEW MEXICO	ARIZONA	UTAH	NEVADA	TOTAL MOUNTAIN	WASH.	OREGON	CALIF.	TOTAL PACIFIC
1943													
January	213,629	102,021	19,710	89,621	37,364	309,377	61,283	235,346	1,068,351	661,838	358,264	977,670	1,997,772
February	195,179	96,982	18,054	79,624	34,048	190,949	44,459	212,981	872,276	616,219	327,065	996,819	1,940,103
March	211,314	97,021	19,452	87,336	36,960	216,865	50,058	265,277	984,283	693,966	358,817	1,107,202	2,159,985
April	181,181	118,927	20,292	82,131	38,728	222,445	49,104	247,139	959,947	682,966	348,953	1,132,227	2,164,146
May	205,605	122,700	26,558	81,677	38,266	265,685	47,694	269,825	1,058,010	698,471	389,494	1,239,465	2,327,430
June	201,687	115,247	29,316	78,842	38,428	280,268	45,862	278,148	1,067,798	697,763	370,026	1,272,391	2,340,180
July	217,075	123,272	34,675	85,943	40,758	322,526	48,909	274,703	1,147,861	704,949	392,453	1,365,434	2,462,836
August	235,592	122,753	35,135	87,053	43,856	264,410	55,787	280,111	1,124,696	701,848	419,192	1,419,201	2,546,241
September	225,227	117,165	23,928	89,863	41,255	276,091	46,832	260,991	1,081,352	780,776	408,871	1,362,769	2,552,416
October	244,685	110,958	20,972	93,091	40,270	300,702	50,762	284,437	1,145,877	831,305	430,335	1,317,501	2,579,141

# FROM THE RESEARCH DIVISION OF WESTERN INDUSTRY

## WAR PRODUCTION CONTRACTS—Western Total Reaches Nearly 18 Billion

In Thousands of Dollars—Source: War Production Board Statistical Division

	MONTANA		—IDAHO—		WYOM.		—COLORADO—		N. MEX.	—ARIZONA—		—UTAH—		—NEVADA—	
	All	Other	All	Other	All	Other	All	Other	All	All	Other	All	Other	All	Other
March	199	...	3,174	19	107	...	56,396	...	4,980	...	...	5,425	...	1,622	...
April	1,754	...	...	3,894	...	...	7,284	...	...	...	...	96	...	643	...
May	—158	100	—81	782	...	...	3,855	107	...	...	...	824	156	197	...
June	191	85	51	...	...	1,338	63	185	...	...	...	1,338	...	1,737	...
July	852	...	1,319	5,689	...	56	1,522	142	10,000	1,399	...	1,131	...	1,146	...
August	...	...	926	693	...	...	...	263	...	...	...	586	...	1,538	...
September	472	...	203	3,367	...	587	4,363	83	...	...	847	2,204	...	1,357	...
Total from June 1940	9,230	185	6,019	15,802	1,106	2,045	244,704	1,899	32,773	13,668	847	159,590	156	8,392	...

	WASHINGTON			OREGON			CALIFORNIA			TOTAL		
	Aircraft	Ships	All Other	Aircraft	Ships	All Other	Aircraft	Ships	All Other	Aircraft	Ships	All Other
March	188,548	310,158	1,905	...	97,697	332	2,254,758	306,096	11,893	2,448,393	714,851	82,630
April	1,427	9,367	28,877	332	9,962	9,368	76,974	33,912	13,139	78,733	53,241	61,055
May	339	2,853	5,992	...	10,942	2,214	80,202	90,472	32,756	80,541	104,523	51,099
June	5,992	8,635	4,189	...	25,193	2,303	235,934	15,184	41,493	241,926	50,435	51,550
July	616	—11,339	24,859	—688	40,816	5,285	850,816	13,076	57,964	860,744	42,609	101,308
August	5,000	136,822	9,198	...	179,578	31,624	625,192	66,030	242,897	630,192	382,430	287,725
September	4,716	12,205	22,554	...	4,147	7,652	81,700	38,378	79,449	86,416	55,317	121,704
Total from June,												
1940	1,360,932	1,806,183	317,114	332	810,155	110,344	8,675,498	3,292,547	1,073,197	10,071,488	5,901,271	1,959,959

## CARLOADINGS—Calls for More

First quarter demands for 1944 for the Pacific Coast Transportation Advisory Board region are estimated by the Board at 431,392 cars, an increase of 3.6 per cent over 1943. Tank car movements of gasoline are expected to be up 20 per cent and other oils up 10 per cent, but vegetable shipments will be down, particularly sugar beets on account of the small acreage.

In the Pacific Northwest Advisory Board territory, November carloadings were the greatest since 1929, livestock, grain products and hogs showing the most important increases. For the first eleven months of 1943, loading of grain and grain products was the highest on record, totaling 6,784 cars as compared to 5,834 in the corresponding period of 1942. Total carloadings of all products combined were off, however, the figure being 1,103,564, as against 1,233,481 in 1942, a drop of 92,791 cars in lumber and forest products being the principal cause.

Figures for the Pacific Coast board, comprised mostly of California, Arizona and Nevada, are as follows:

(California, fringe of southern Oregon, including Astland but not Klamath Falls, Nevada, Arizona, western New Mexico—figures from Pacific Coast Transportation Advisory Board.)

Commodity	1943	1944	Inc.	Dec.
Agricultural imp. & veh.	73	88	20.5	...
Beans, peas and seeds	2,236	2,471	10.5	...
Brick and clay products	925	794	...	14.2
Canned foods	15,597	15,721	...	...
Cement	10,676	6,587	...	38.3
Citrus fruits:				
Oranges	11,909	16,000	34.3	...
Lemons	3,331	3,700	11.1	...
Total	15,240	19,700	29.3	...
Coal and coke	4,072	3,632	...	10.8
Cotton & cot. seed prod.	4,672	3,500	...	25.1
Cotton	762	700	...	8.1
Cotton seed products	5,434	4,200	...	22.7
Deciduous fruits	499	600	22.9	...
Grapes	329	275	...	16.4
Tree fruits	111	150	35.1	...
Apples	939	1,025	9.1	...

Commodity	1943	1944	Inc.	Dec.
Dried fruits	5,025	6,000	19.4	...
Edible nuts	312	175	...	44.2
Fertilizer	8,375	8,600	2.7	...
Grain, flour & mill prod.				
Grain	3,509	3,860	10.0	...
Flour & mill prod.	5,009	4,508	...	10.0
Total	8,518	8,368	...	1.8
Gravel, rock and sand	39,512	38,444	...	2.7
Hay, straw & alfalfa	1,354	2,500	84.6	...
Iron and steel	7,182	10,040	39.8	...
Lime and plaster	1,555	1,549	...	...
Livestock and raw wool				
Livestock	5,840	6,000	2.7	...
Raw wool	1,971	1,850	...	6.1
Total	7,811	7,850	...	...
Lumber and forest prod.				
Logs	8,052	7,693	...	4.4
Lumber (inc. piling and ties)	20,333	20,188	...	...
Mill prod. (excl. lumber)	1,094	1,204	10.1	...
Total	29,479	29,085	...	1.3
Machinery and boilers	2,486	2,866	15.3	...
Ore (iron & N.O.S.)	5,529	5,812	5.1	...
Packing house products	1,058	1,214	14.7	...
Paper and paper products	1,304	1,413	8.3	...
Petroleum products				
Oil	27,947	30,741	10.0	...
Gasoline	10,036	12,043	20.0	...
Total	37,983	42,784	12.6	...
Poultry & Dairy products	186	203	10.2	...
Rice	1,159	1,200	3.5	...
Salt	2,571	2,735	6.4	...
Sugar and sugar beets				
Sugar	4,426	4,625	4.5	...
Sugar beets	1,675	650	...	61.2
Total	6,101	5,275	...	13.5
Vegetables and melons				
Vegetables	30,428	28,000	...	8.0
Cantaloupes	...	...	...	...
Potatoes	...	...	...	...
Melons	...	...	...	...
Total	30,960	28,600	...	7.6
Wine	3,873	3,800	...	1.9
Miscellaneous				
Merchandise, l.c.l.	46,936	48,000	2.3	...
Misc. perishables	13,550	14,173	4.6	...
Mfgs. and misc.	98,325	106,486	8.3	...
Total	158,811	168,659	6.2	...
GRAND TOTAL	416,336	431,392	3.6	...

## PULPWOOD—West Ahead

Pacific Northwest pulpwood deliveries for 1943 apparently were more likely to reach the WPB production goal than other parts of the country. Up to the first of October estimated deliveries in the Northwest were 1,782,000, or 80 per cent of the 2,200,000 goal established. National deliveries were estimated at about 73 per cent of the year's goal.

## WAREHOUSING—Tightens

Warehouse space in use in public merchandise warehouses in the 11 Western states increased 61,566 square feet in October, 1943, over September, a rise from 90.1 per cent of total occupable space to 91.0, the highest percentage in any section of the country. This compares with a national percentage for October of 85.3 per cent. State figures are as follows:

	Sept.	Oct.
MOUNTAIN AND PACIFIC, TOTAL	90.1	91.0
Idaho	93.5	93.5
Montana, Utah and Wyoming	89.9	78.8
Arizona, Nevada and New Mexico	91.3	93.4
Colorado	81.4	90.5
Washington	94.7	93.9
Oregon	86.3	88.6
California, except L. A. and S. F.	83.6	91.3
Los Angeles	89.8	90.2
San Francisco	94.0	92.7

## THE TREND

First civilian contracts awarded—water heaters to Seattle and Portland firms. Expected other contracts will follow in due time, and apparently the West will share proportionately in reconversion opportunities.

Employment peak seems to have been reached, and better labor utilization should make it possible to maintain production at present levels or perhaps even increase it.

Changes in war situation may affect type of contracts awarded to the West but not the volume. For example, superior destructive power of American ammunition causes reduction in output, but production of bombs and fuses will increase.

Increased use of refrigerator cars for westbound shipments of all kinds—11,777 moved to the coast in October, as against 5,454 in January 1943, a 115 per cent increase—may materially diminish transportation shortages.



## Lockheed and Douglas Men Discuss Welding

Flash and spot welding were discussed at the last annual meeting of the American Welding Society by C. B. Smith of Douglas Aircraft and N. C. Clark, senior research engineer of Lockheed.

The airplane part most frequently made by the former method, according to Mr. Smith, is the engine control rod made from a tube either  $\frac{3}{8}$  or  $\frac{1}{2}$  inches in diameter with a wall thickness of approximately 0.035 inches, on which are flash welded suitable end fittings turned out on the screw machine. Parts of this type can be flash welded on both ends in less than a minute, so the total cost is nominal.

He also described a very satisfactory engine mount in which threaded forged ends are flash welded to tubing to form the struts which are bolted to forgings to complete the mount assembly. In the landing gear a similar method is used, for special machined forgings welded on tubing and later bolted into the assembly. In hydraulic equipment, pistons are flash welded to piston rods and heads are flash welded on cylinder assemblies.

Tests have proved that unheat-treated flash welds can be accepted as having the same strength as the parent material in the normalized condition, and when the assembly is heat treated after welding, the weld area has proved to be just as

strong as the unweld area. This acceptance of the strength of flash welds gives the process a weight saving advantage over other welding methods for aircraft parts, since arc and gas welded assemblies must be designed on the basis of a joint efficiency of only 80 per cent.

Mr. Clark stressed the necessity for statistical control in spot welding of aluminum to maintain high consistency and adequate strength and to measure the quality of production adequately. He also urged monitoring of the spot welding machines or non-destructive testing of the finished product.

He said the operating factors in most need of standardization in spot welding are control of energy delivered to the weld, electric current wave shape, the amount of electrode force, forge time delay (if used) and the shape, surface condition and life of the electrode tips.

## Tax-Exempt Property

Forty-two per cent of the taxable property in King County, Washington, in which Seattle is located, is now tax-exempt, due largely to government control of property for war use, and the county authorities are investigating the legality of taxing war factories. In Ferry County 84 per cent of the land is government-owned, in Okanogan County 78 per cent and Chelan County 73 per cent.

## Gen. Montgomery Thanks Pacific Car & Foundry

General Sir Bernard Montgomery of the British Eighth Army has sent Pacific Car & Foundry Company of Seattle a letter of appreciation for their part in making the General Sherman tanks. Pacific's tank contract was recently completed.

"I am thinking of those who forged, fabricated and cast the steel . . . and the countless parts which are required to make the finished tank," he said. "I would like them to feel the enthusiasm with which all our crews regard these tanks. I would like them to realize how these Sherman M-4s have dominated the German tanks and driven them from the battlefield whenever we have met them."

## Navy Jobs at San Diego

New construction projects just approved by the Secretary of the Navy include \$3,480,250 for the San Diego area. The largest item represents \$1,750,000 for the Joint Amphibious Communications School and additional housing facilities at Camp Pendleton. Among the others are \$200,000 for construction of a Fire Fighters' School at the Naval Training Station, \$203,550 for additional barracks and supporting structures at the Amphibious Training Base, Coronado, and \$260,000 for modernization of engine test cells at the Naval Air Station.

# PUNCH-LOK

... the Easiest, Fastest, Most Dependable and Economical Method for SOLVING HOSE CLAMPING PROBLEMS

The PUNCH-LOK Hose Clamp is a mechanical device for clamping fittings, menders, or ordinary pipe to a hose. A broad, flat, high tensile strength galvanized steel band is double-wrapped around the joint. After tensioning with a pull of 1000 pounds within the LOK-ING-TOOL, the ends are securely locked together under tension without loss of tension. The excess band is then cut off flush with the Lok so that the entire joint is streamlined for safety.

Once the PUNCH-LOK Hose Clamp has been locked, vibration or rough handling cannot loosen it. There is no possibility of injuring or cutting the hose in any way—the clamp will outwear the hose—and the cost is no more than the ordinary clamp of yesterday. Stop your hose leaks and troubles with PUNCH-LOK.

15 SECONDS TIME STOPS COSTLY LEAK LOSS.

Write today to Department B for illustrated folder or contact Harry M. Thomas, Pacific Coast Representative, 1554 Oakland Avenue, Piedmont 11, California, for the name of your nearest distributor.



• THE BAND Double-Wrapped



• THE TOOL Heat-Treated



• THE JOINT Punch-Locked

## PUNCH-LOK COMPANY

321 N. Justine St. Chicago, Illinois  
DISTRIBUTORS IN PRINCIPAL WESTERN CITIES

## Protect Your Tanks and Stacks with PLASTIKSTEEL

PLASTIKSTEEL Waterproof Lining for Steel or concrete tanks insures perfect protection from alkaline deposits such as brine, chlorine, soaps, etc. PLASTIKSTEEL is absolutely tasteless—no fumes to contend with in making application with whisk broom or trowel.

PLASTIKSTEEL PASTE added to PLASTIKSTEEL Waterproof Lining creates a superior bond on smooth surfaces including WOOD.

PLASTIKSTEEL High Heat Lining, when applied with whisk broom or trowel to steel smoke stacks or breechings, gives perfect protection from sulphurous deposits formed by the condensation of gases. PLASTIKSTEEL High Heat Lining has the same coefficient of expansion and contraction as steel plate and is guaranteed for five years.



• PLASTIKSTEEL Products have been tested in service over a period of years by Railroads, Oil Companies, Breweries, Bakeries, Packing Plants, Sugar Mills, Orchards, Laundries, Buildings, and other diversified industries from Hawaii to the Atlantic Sea Board.

## PLASTIK STEEL SERVICE

San Carlos • California



## WESTERN MARKETERS AND MARKETING

A monthly column devoted to the promotional and advertising plans of western manufacturers

From the *Ryder & Ingram* agency, Oakland, comes word of the addition of E. A. Bonfield to the staff. Bonfield leaves his present assignment with the Russell T. Gray Co., Chicago, to arrive on the coast about January 1. Well known in coast advertising circles, he was formerly with King Publications prior to his connection with the Gray Co.

A joint announcement released by *The Connor Company*, San Francisco, and *Frederick H. Henning* releases the information to the effect that hereafter the two will operate independently. The Connor Company will remain in the Rialto Bldg. while Henning opens new offices in the Russ Bldg.

To the *Garfield & Guild* agency, San Francisco, the *Industrial & Commercial Electronics* account of Belmont, California. Richard Berggren will be account executive.

*The Condon Co., Inc.*, of Tacoma, will hereafter service the *Douglas Fir Plywood Association* advertising. Account was for-

merly handled by the McCann-Erickson agency in Portland.

The San Francisco office of *Foot, Cone & Belding* adds Elliott V. Bogert to the staff as head of the merchandising division. Bogert was successively with *This Week Magazine*, the Office of Price Administration, and the San Francisco Chronicle.

Late of station WHK-WCCE, Cleveland, Ohio, Milton C. Hill joins the *McCarty Co.*, Los Angeles as copywriter.

The *L. C. Cole & Co* agency, San Francisco moves to new and larger quarters in the Russ Building.

### Shipyard Taken Over

Seizure by the navy of the shipyard of Los Angeles Shipbuilding and Drydock Corp. last month because of delayed output and high costs resulted in Todd Shipbuilding Corp. being named by the navy to operate the yard. Fred D. Hesley, former president of the Todd Erie Basic Drydock of Brooklyn and the Todd Galveston Drydock was made general manager of the yards. Ross W. Copeland, former general manager of the Houston Shipbuilding Corp. was appointed assistant general manager in charge of the shipbuilding division. Herman Mininkine, former superintendent of repairs at the Todd Brooklyn yard is in charge of the repair division and is also serving as assistant general manager.

### Win Idea Contest

Marinship Corporation has swung into the lead in the "Ideas for Victory" contest, bringing this championship to the Pacific Coast for the first time, and beating out Packard Motor Car Corp. and Radio Corporation of America. Twenty-two workers at this Sausalito, California, shipyard were awarded 23 national production honors for their ideas in speeding ship construction and the saving of materials. The record was stimulated through a monthly suggestion contest originated by Ray L. Martin, Marinship production manager, and through the Labor-Management Committee, of which Edward Lynch is coordinator.

### Unemployment Insurance

Unemployed workers from the trade and service industries accounted for almost half the October disbursements from the California Unemployment Insurance Fund. Payments have dropped from more than \$52 million in 1941 to a probable \$7 million or less in 1943, and the weeks compensated from 3,767,000 in 1941 to an estimated 480,000 in 1943.

### \$89,000 Unclaimed Wages

Approximately \$89,000 in 5,820 forgotten pay checks are being held at Boeing Aircraft Company in Seattle. The largest was for \$180, and eleven others were for more than \$100.

# Speed and Precision!

Are two important essentials required to keep production schedules of War Material flowing ahead to final Victory.

Pacific's answer to speed is clearly demonstrated by its ability to increase the production of vital war equipment to the extent where many items are now being delivered 1000% faster than by pre-war methods.

With this speed-up of production, tolerances and precision workmanship enter into the picture as the most important factor.

Pacific's record of 1/10th of 1% rejections on many production runs speaks well for its quality products.

## Pacific Screw Products Corp.

Established 1929

LARGEST AND BEST EQUIPPED SCREW MACHINE PLANT IN THE WEST  
5211 Southern Avenue South Gate, Calif.

Kimball 5211



# LABOR

## AND THE INDUSTRIAL WEST

### Wage Guides for Oregon-Washington Industries

Approvable wage rates for key occupations in Washington and Oregon have been adopted by the Twelfth Regional War Labor Board. These wage brackets will govern War Labor Board decisions on requests for wage increases.

Washington has been divided into seven areas, and Oregon into four areas, with separate brackets or minimum sound and tested rates set for each. These rates vary from one area to another, depending on labor conditions and the wage history of an area.

"These brackets do not represent the highest or the lowest wage rates paid for the job in the area," Chairman George Bernard Noble explained. "Rather, they come at a point between the lowest and the average rates, where one finds the first important grouping of rates paid for a particular job. In general this is about 10 per cent below the average paid in a given area.

"We are not permitted, under the president's 'hold the line' order, to raise everyone to high or even average rates. The rates listed in these brackets represent the maximum which the Regional Board may approve, under the 'hold the line' order, except where the Little Steel Formula would permit more, or in 'rare and unusual' cases where the vital needs of war production require approving higher rates.

"With establishment of these rates for most of the important industries of Washington and Oregon, employers and labor for the first time have some definite guides as to what they may expect from the board from wage applications."

Following are given wage rates for key industries and the areas in which they apply:

**AREA I**—Whatcom, Skagit, Snohomish, Clallam, Island, San Juan counties and major portion of Kitsap county (exclusive of Bremerton).

Laundry & Dry Cleaning—base rate 50c; dry cleaners 98c; machine pressers, wool, 84c.

Canning, etc.—base rate, heavy labor 80½c; base rate, light labor, 66½c.

Seed—minimum rate, heavy labor, 80½c.

Fish Canning—base rate, heavy labor, 82½c; base rate, light labor, 66½c.

Grain Storage—manual labor, 80½c.

Dairy—pasteurizers, machine operators (semi-skilled), firemen 85c; cleaners, can and bottle washers, 80c.

Meat Packing—boners, beef cutting, 99c.

Beverages—filling and capping machine tenders (alcoholic) \$1.12½.

Manufacturing Wood Boxes—cut-off sawyers, 97½c; off-bearers, 85c.

Pulp & Paper—common labor, heavy; helpers 85c; common labor, light, 72½c; journeyman, \$1.10; specialists, 95c.

Furniture Manufacturing—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manufacturing—common labor, 90c.

Feed Manufacturing—batch-mix operators, 85c.

Printing—linotype operators, \$1.03.

Metal Trades—journeyman, \$1.20; helper, 93c.

Concrete & Pipe Manufacturing—laborer, 80c; off-bearer, 85c; operator-machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 57c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 62c.

Standard Clerical—Jr. stenographer, Jr. computer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 68c.

Advanced Clerical—senior stenographer, Jr. bookkeeper, 76c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 84½c.

Specialized Clerical—Jr. accountant, office manager, 94c.

**AREA II**—Seattle Defense Area including Seattle, Bremerton, Tacoma, Renton and neighboring smaller towns.

Laundry & Dry Cleaning—base rate, 62c.

Canning, etc.—base rate, heavy labor, 80½c; light labor, 66½c.

Seed—minimum rate, heavy labor, 80½c.

Fish Canning—base rate, heavy labor, 82½c; light labor, 66½c.

Grain Storage—manual labor, 90c.

Dairy—pasteurizers, \$1.15½; machine operators (semi-skilled), \$1.12½.

Bakeries—bakers, all around \$1.34; mixers and oven men, \$1.34.

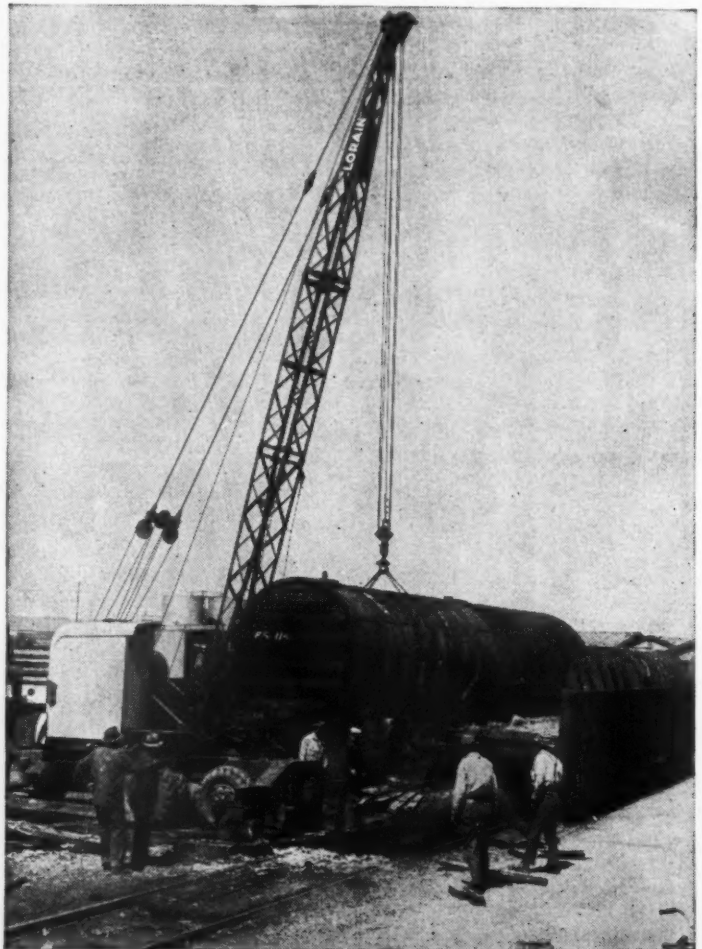
Meat Packing—boners, beef cutting; sausage makers, \$1.04½.

Beverages—cleaners, brewery equipment, \$1.20; filling and capping machine tenders (alcoholic), \$1.12½.

Paper Board Manuf.—boxmakers, hand; machine operator, 60c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeyman, \$1.10; specialists, 95c.

• **SCRAP IRON**—An obsolete tar heat-exchanger being loaded by a crew of motor transport employees of Richmond Refinery of Standard Oil Company of California, for transportation to the scrap yard.



Furniture Manuf.—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manufacturers—common labor, 90c.

Flouring Mills—packers, weighers and sewers, 99c.

Printing—machine operator, \$1.4214, handman, \$1.375; pressmen, cylinder, offset, \$1.375; platen, multilith, \$1.276; bookbinders, foreman and journeymen, \$1.375; journeymen, 77c.

Metal Trades—journeymen, \$1.20; helpers, 93c; pattern maker, \$1.45; tool & die maker (manuf. shop), \$1.351/2.

Electrical Machinery Manuf.—assemblers, bench—class A, 95c; class B, 80c.

Concrete & Pipe Manuf.—laborer, 90c; off-bearer, 95c; operator—mixer, machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 59c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 64c.

Standard Clerical—Jr. stenographer, Jr. comptometer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 70c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 78c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 861/2c.

Specialized Clerical—Jr. accountant, office manager, 96c.

**AREA III**—Eastern King County, Jefferson, Grays Harbor, Mason, Thurston, Pacific, Wahkiakum, Lewis, Cowlitz, Pierce and Skamania Counties, and Clark County, excluding Vancouver vicinity.

Laundry & Dry Cleaning—base rate, 50c; dry cleaners, 95c; machine pressers, wool, 85c.

Canning, etc.—base rate, heavy labor, 771/2c; light labor, 631/2c.

Seed—minimum rate, heavy labor, 771/2c.

Fish Canning—base rate, heavy labor, 821/2c; light labor, 661/2c.

Grain Storage—manual labor, 771/2c.

Dairy—pasteurizers, machine operators (semi-skilled), 85c; cleaners, can and bottle washers, 80c.

Bakeries—bakers, all around \$1.05; mixers and oven men, \$1.121/2; checker, wrapper and machine operator, 80c; helpers, 75c.

Beverages—filling and capping machine tenders (alcoholic) \$1.121/2.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 721/2c; journeymen, \$1.10; specialists, 95c.

Furniture Manuf.—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manuf.—common labor, 90c.

Feed Manuf.—batch-mix operators, 88c.

Metal Trades—journeymen, \$1.20; helper, 93c.

Concrete & Pipe Manuf.—laborer, 80c; off-bearer, 85c; operator, machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 57c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 62c.

Standard Clerical—Jr. stenographer, Jr. comptometer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 68c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 76c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 841/2c.

Specialized Clerical—Jr. accountant, office manager, 94c.

**AREA IV**—Portland Metropolitan Area and Vancouver, Washington, includes all of Multnomah, Northwest portion of Clackamas and Southeast portion of Washington Counties.

Laundry & Dry Cleaning—base rate (semi-skilled), 62c; head dry cleaners, \$1; second cleaners; machine pressers, wool, 90c.

Canning, etc.—base rate, heavy labor, 801/2c; light labor, 661/2c.

Seed—minimum rate, heavy labor, 801/2c.

Flax Processing—base rate, heavy labor, 75c.

Fish Canning—base rate, heavy labor, 821/2c; light labor, 661/2c.

Grain Storage—manual labor, 801/2c.

Dairy—pasteurizers, 95c; machine operators (semi-skilled), fluid milk—inside workmen, 91c; cleaners, can and bottle washers, 85c.

Bakeries—bakers, all around, \$1.21; mixers and oven men, \$1.271/2; checkers, wrapper and machine operator, \$1.01; helpers, apprentice, 761/2c.

Meat Packing—sausage makers, \$1.031/3.

Beverages—filling and capping machine tenders (non-alcoholic), \$1.05; helpers, \$1.

Mfg. Wooden Boxes—cut-off sawyers, 95c; off-bearers, 75c; rip sawyers, 85c.

Pulp & Paper—common labor, heavy; helpers 85c; common labor, light, 721/2c; journeymen, \$1.10; specialists, 95c.

Furniture Manuf.—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manuf.—common labor, 90c.

Flouring Mills—packers, weighers and sewers, 95c; millers, \$1.121/2c; grain unloaders, hand, 90c.

Printing—bindery workers, hand, 671/2c; pressmen, cylinder press, hand compositor, \$1.25; pressmen, rotary or web-rotary, \$1.151/2.

Metal Trades—journeymen, \$1.20; helper, 93c; pattern maker, \$1.63.

Concrete & Pipe Manuf.—laborer, 85c; off-bearer, 95c; operator, mixer machine, \$1.

Foundries—blacksmith, \$1.20; helpers, 98c.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 57c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 62c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 76c.

(Continued on Page 54)



## SUNDAYS OR HOLIDAYS

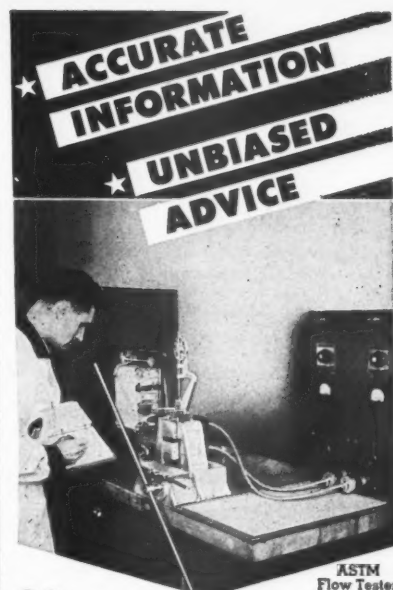
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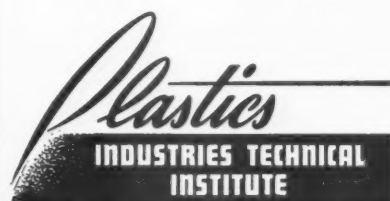
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### WAGE BRACKETS (Cont'd from Pg. 53)

Standard Clerical—Jr. stenographer, Jr. computer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 68c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 84½c.

Specialized Clerical—Jr. accountant, office manager, 94c.

**AREA V**—Willamette Valley and adjacent Coastal strip including Clatsop, Columbia, Washington, Tillamook, Yamhill, Lincoln, Benton, Clackamas, Marion, Linn, Lane, Polk and western three-fourths of Hood River County (does not include city of Hood River).

Laundry & Dry Cleaning—base rate (semi-skilled), 50c.

Canning, etc.—base rate, heavy labor, 77½c, light labor, 63½c.

Seed—minimum rate, heavy labor, 80c.

Flax Processing—base rate, heavy labor, 75c.

Grain Storage—manual labor, 77½c.

Dairy—pasteurizers, 90c; machine operators (semi-skilled), 85c; cleaners, can and bottle washers, 80c.

Bakeries—bakers, all around; mixers and oven men, \$1.15; checker, wrapper and machine operator, 81c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Furniture Manuf.—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manuf.—common labor, 90c.

Feed Manuf.—batch-mixer operators, 80c; common labor, 75c.

Metal Trades—journeymen, \$1.15; helper, 90c; specialists, \$1.

Concrete & Pipe Manuf.—laborer, 85c; off bearer, 95c; operator, mixer, machine, \$1.

Elementary Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 58c.

Standard Clerical—Jr. stenographer, Jr. computer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 64c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 72c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 80½c.

Specialized Clerical—Jr. accountant, office manager, 90c.

**AREA VI**—Southwest Oregon (Roseburg, Grants Pass, Medford, Marshfield, Klamath Falls, etc.) including the following counties: Douglas, Coos, Curry, Josephine and Western two-thirds of Clatsop.

Laundry & Dry Cleaning—base rate (semi-skilled) 50c.

Canning, etc.—base rate heavy labor 77½c; light labor, 63½c.

Seed—minimum rate, heavy labor, 77½c.

Flax Processing—base rate, heavy labor, 75c.

Grain Storage—manual labor, 77½c.

Bakeries—bakers, all-around, 94c; mixers and oven men, \$1.04; checker, wrapper and machine operator, 88½c; helpers, 75c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Furniture Manuf.—classification No. 1, \$1; No. 2, 90c; No. 3, 80c; No. 4, 70c; No. 5 (base rate), 65c.

Lumber Manuf.—common labor, 90c.

Metal Trades—journeyman, \$1.20.

Concrete & Pipe Manuf.—laborers, 85c; off bearer, 95c; operator, mixer, machine, \$1.

Elementary Clerical—file, office manager, mimeograph operator, 55c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 60c.

Standard Clerical—Jr. stenographer, Jr. computer operator, Jr. calculating machine op-

erator, Sr. bookkeeping clerk, PBX operator, 66c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 74c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 82½c.

Specialized Clerical—Jr. accountant, office manager, 92c.

**AREA VII**—Spokane Industrial Area, including Cheney, Dishman, Mead.

Laundry & Dry Cleaning—base rate, 50c; dry cleaners, \$1; machine pressers, wool, 77½c.

Canning, etc.—base rate, heavy labor, 77½c, light labor, 63½c.

Seed—minimum rate, heavy labor, 77½c.

Grain Storage—manual labor, 77½c.

Dairy—pasteurizers, 75c; machine operators (semi-skilled), 69½c; truck drivers, 92½c.

Meat Packing—manual labor, 80c.

Beverages—cleaners, brewery equipment, \$1.11; filling and capping machine tenders (alcoholic), \$1.05; filling and capping machine tenders (non-alcoholic) 90c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Lumber Manuf.—common labor, 82½c.

Flouring Mills—packers, weighers and sewers, 95c; millers \$1.15 (1500 bbl. mill), \$1; (500 bbl. mill); bolters, \$1.05; manual labor, 85c.

Printing—linotype operators, pressmen, cylinder press, rotary or web-rotary, \$1.10; bindery workers, hand 60½c.

Metal Trades—journeyman, \$1.15; helper, 80c; tool and die maker (job shop) \$1.30.

Non-electrical Machinery Manuf.—assemblers, bench—class B. \$1.

Concrete & Pipe Manuf.—laborer, 80c; off bearer, operator, mixer, 85c; operator machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 55c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 60c.

Standard Clerical—Jr. stenographer, Jr. computer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator 66c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 74c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 82½c.

Specialized Clerical—Jr. accountant, office manager, 92c.

**AREA VIII**—Ferry, Stevens, Pend, Oreille Counties and Northeastern Spokane County.

Laundry & Dry Cleaning—base rate, 50c.

Canning, etc.—base rate, heavy labor, 77½c; light labor, 63½c.

Seed—minimum rate, heavy labor, 77½c.

Grain Storage—manual labor, 77½c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Lumber Manuf.—common labor, 82½c.

Flouring Mills—packers, weighers and sewers, 95c; millers, \$1.15, (1500 bbl. mill) \$1.10, (500 bbl. mill); bolters, \$1.05.

Metal Trades—journeyman, \$1.15.

Concrete & Pipe Manuf.—laborer, 80c; off bearer, operator, mixer, 85c; operator, machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 55c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 58c.

Standard Clerical—Jr. stenographer, Jr. computer operator; Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 64c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 72c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 80½c.



Specialized Clerical—Jr. accountant, office manager, 90c.

**AREA IX**—Southern Spokane County exclusive of the city of Spokane, Garfield, Lincoln, Adams, Franklin, Walla Walla Counties, eastern and southwest Grant County, exclusive of Coulee City, southern Benton, eastern and southern Klickitat, southeast corner of Yakima Counties.

Laundry & Dry Cleaning—base rate, 50c; dry cleaners, 93c; machine pressers, wool, 86c. Canning, etc.—base rate, heavy labor, 77½; light labor, 63½c.

Seed—minimum rate, heavy labor, 77½c. Grain Storage—manual labor, 77½c.

Dairy—pasteurizers, machine operators (semi-skilled), 72c; cleaners, can and bottle washers, 62½c.

Bakeries—bakers, all around, mixers and oven men, \$1; checkers, wrapper and machine operators, 80c; helpers, 70c.

Meat Packing—boners, beef cutting, sausage makers, 88c; manual labor, 78c.

Beverages—filling and capping machine tender (alcoholic), 95c; non-alcoholic, 70c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Lumber Manuf.—common labor, 82½c.

Flouring Mills—packers, weighers, sewers, 95c; millers, \$1.15, (1500 bbl. mill) \$1.10, (500 bbl. mill); bolters, \$1.05.

Food Manuf.—batch-mixer operators, \$1.

Printing—linotype operators, \$1.05; bindery workers, hand, 50c; pressmen, cylinder press, 95c; rotary or web-rotary, 97½c.

Metal Trades—journeyman, \$1.15; helper, 80c.

Concrete & Pipe Manuf.—laborer, 80c; off-bearer, operator, mixer, 85c; operator, machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 53c.

Basic Clerical—typist, Jr. bookkeeping clerk, general receptionist, telephone operator, order clerk, 58c.

Standard Clerical—Jr. stenographer, Jr. comptometer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 64c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 72c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 80½c.

Specialized Clerical—Jr. accountant, office manager, 90c.

**AREA X**—Okanogan, Chelan and Kittitas Counties, Douglas (and Coulee City in Grant) northwest portion of Grant (including Ephrata) Yakima, exclusive of southeast corner, northwest portion of Klickitat Counties).

Laundry & Dry Cleaners—base rate, 50c.

Canning, etc.—base rate, heavy labor, 77½; light labor, 63½c.

Seed—minimum rate, heavy labor, 77½c.

Grain Storage—manual labor, 77½c.

Dairy—pasteurizers, 80c; cleaners, can and bottle washers, 73c.

Bakeries—mixers and oven men, \$1; checker, wrapper and machine operator, .717c.

Meat Packing—boners, beef cutting, sausage makers, 95c; manual labor, 78c.

Manuf. Wooden Boxes—cut-off sawyers 87½c; off-bearers, 65c; rip sawyers, 72½c.

Pulp & Paper—Common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Lumber Manuf.—common labor, 80c.

Flouring Mills—packers, weighers, sewers, 95c; millers, \$1.15, (1500 bbl. mill) \$1.10, (500 bbl. mill); bolters, \$1.05.

Metal Trades—journeymen, \$1.15.

Concrete & Pipe Manuf.—laborer, 80c; off-bearer, operator, mixer, 85c; operator, machine, \$1.

Elementary Clerical—file clerk, office messenger, mimeograph operator, 53c.

Basic Clerical—typist, Jr. bookkeeping clerk,

general receptionist, telephone operator, order clerk, 58c.

Standard Clerical—Jr. stenographer, Jr. comptometer operator, Jr. calculating machine operator, Sr. bookkeeping clerk, PBX operator, 64c.

Advanced Clerical—Sr. stenographer, Jr. bookkeeper, 72c.

Supervisory Clerical—Sr. bookkeeper, supervising clerk, secretary, 80½c.

Specialized Clerical—Jr. accountant, office manager, 90c.

**AREA XI**—All the following Counties located in Eastern Oregon: Morrow, Sherman, Jefferson, Wasco, Deschutes, Lake, Harney, Malheur, Baker, Cook, Union, Wallowa, Gilliam, Umatilla, Grant, Wheeler and Jackson; and eastern one-third of Hood River County (including Hood River) and eastern one-third of Klamath County.

Laundry & Dry Cleaning—base rate (semi-skilled) 50c.

Grain Storage—manual labor, 77½c.

Dairy—pasteurizers, machine operators, (semi-skilled), 75c; cleaners, can and bottle washers, 70c.

Beverages—filling and capping machine tenders (non-alcoholic), 94c; helpers, 79c.

Pulp & Paper—common labor, heavy; helpers, 85c; common labor, light, 72½c; journeymen, \$1.10; specialists, 95c.

Lumber Manuf.—common labor, 87½c.

Flouring Mills—packers, weighers, sewers, 95c; millers, \$1.15, (1500 bbl. mill) \$1.10, (500 bbl. mill); bolters, \$1.05.

Metal Trades—journeyman, \$1.15.

Concrete & Pipe Manuf.—laborer, 85c; off-bearer, 95c; operator, mixer, machine, \$1.

Clerical, etc. (same as Area X).

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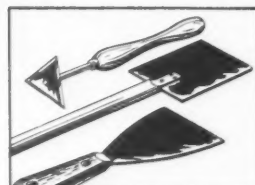
Presented in the hope that they will prove interesting and useful to you.

### Beryllium Copper Bites Into Steel

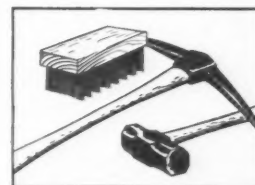
It is an old saying that when a dog bites a man it is not news, but when a man bites a dog it is news. That being the case, it is certainly news when copper bites into steel. Copper is, of course, one of the softer metals but when 2 percent beryllium is added to copper, its characteristics are changed. The alloy is heat treatable which explains the remarkable strength and hardness. Hit a chisel made of Beryllium Copper with a hammer and it will bite into steel without dulling the edge. Tools made of Beryllium Copper are non-sparking and therefore are used in ordnance plants, oil refineries and other places where explosions may occur from sparks off steel tools. Tensile strength as high as 200,000 lbs. psi can be obtained with Beryllium Copper; hence, it is used for many applications where resistance to high loading and impact fatigue are important, such as airplane motor bushings. Most of the critical springs and diaphragms used in aviation, Navy and Signal Corps instruments are made of Beryllium Copper because of its reliability as a spring material.

We hope this has proved interesting and useful to you just as Wrigley's Spearmint Gum is proving useful to millions of people working everywhere for victory.

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Man has tried for ages to rediscover the art of hardening copper. Today this can be done by adding to copper a small percentage of beryllium.



Not only does it produce an alloy harder than tempered steel, but one that does not produce sparks, an essential when working near highly combustible materials.

X-44

# THE WEST ON ITS WAY

## ARIZONA

**DUST CONTROL**—Galen B. Finch, San Bernardino, has been awarded contract by U. S. District Engineer Office, Los Angeles, for dust control at auxiliary fields, Marana, Ariz., to cost between \$60,000 and \$70,000.

**DWELLING UNITS**—E. W. Duhamel Construction Company, Phoenix, Ariz., has been awarded \$260,922 contract by Housing Authority of County of Mohave, for construction of 120 temporary dwelling units and one project facilities building, at Kingman, Ariz.

**CONSTRUCTION**—W. A. Beaubien, 2901 W. Taylor Street, Phoenix, Ariz., has been awarded contract by U. S. District Engineer Area Office, Phoenix, for construction at Luke Field, Phoenix, Ariz.

**RECREATIONAL CENTER**—La Rue Construction Company, Tucson, has been awarded contract by Federal Works Agency for construction of recreational center, at Tucson, Ariz.

## CALIFORNIA

**RECREATION BUILDING**—Stolte, Inc., Oakland, Calif., have been awarded contract by Navy Department, Washington, D. C., for construction of recreation building at Arcata, Humboldt County, Calif.

**ALTERATIONS AND REPAIRS**—L. C. Anderson, San Diego, has been awarded \$66,990 contract by U. S. Navy, San Diego, for construction of alterations and repairs to existing storehouse building, San Diego, Calif.

**BARRACKS**—Fred J. Early Jr., Co., Inc., 369 Pine Street, San Francisco, has been awarded contract by Navy Department, Washington, D. C., for construction of hospital corps WAVES barracks at Pleasanton, Calif., to cost \$102,167.

**CONSTRUCTION**—Mercer-Fraser Company, Eureka, has been awarded \$46,889 contract by Navy Department, Washington, D. C., for construction at Treasure Island, Calif.

**BUILDING**—Elmer J. Freethy, El Cerrito, has been awarded contract for construction of fittings office building for U. S. Maritime Commission, at Richmond, Calif.

**WAREHOUSE**—Moore and Roberts, San Francisco, has been awarded contract by Kaiser Company, Inc., for construction of central warehouse at Shipyard No. 2, Richmond, Calif.

**BUILDING ALTERATIONS AND ADDITIONS**—George Petersen, San Leandro, has been awarded contract by U. S. Engineer Office, San Francisco, for building alterations and additions in San Francisco Bay Area, Calif.

**CARGO SHIPS**—Consolidated Steel Company, Ltd., Wilmington, has been awarded contract by U. S. Maritime Commission, for construction of ten C-1 type cargo ships.

**BUILDING**—Harris Construction Company, Fresno, has been awarded \$50,000 contract by U. S. Engineer Office, Sacramento, for construction of buildings in Kern County, Calif.

**ICE STORAGE**—Wonderly Construction Company, Long Beach, has been awarded contract by U. S. District Engineer Office, Los Angeles, for construction of ice storage house at Camp Irwin, Mojave Desert, Calif.

**CONCRETE BARGES**—Concrete Ship Constructors, National City have been awarded contract for construction of 265-ft. concrete barges for the Army Quartermaster Corps.

**BARGES**—The Concrete Ship Constructors, National City, have been awarded \$7,500,000 contract by U. S. Maritime Commission for construction of 25 non-propelled concrete barges, 265 feet in length.

**ADDITIONAL FACILITIES**—M. H. Golden, San Diego, has been awarded \$149,000 contract by U. S. Navy, San Diego, for construction of additional facilities at the West Coast Sound School in the San Diego area.

**CHURCH**—Trewitt, Shields and Fisher, Fresno, has been awarded \$49,675 contract for construction of church building for First Christian Church, Vallejo, Calif.



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Downs Crane Wheels are furnished in Pin and Keeper, Plain and Live Shaft types in tread diameters from 7½" to 24" inclusive. Wheel load capacities to suit any condition. Full roller bearing wheel assemblies are ready for mounting in crane end trucks. Also available with bronze bushings or any type of ball or roller bearings for any style of mounting.

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**HANGARS**—Robert E. McKee, West Los Angeles, has been awarded contract by U. S. District Engineer Office, Los Angeles, for construction of hangars at an Air Transport Command Base, Long Beach, Calif., to cost between \$40,000 and \$50,000.

**BUILDING**—Schnabel and Arend, Los Angeles, have been awarded contract by U. S. District Engineer Office, Los Angeles, for construction of navi-trainer building and utilities, at an Army flying school, Victorville, Calif.

**BUILDING**—George B. Thatcher, North Hollywood, has been awarded contract by U. S. District Engineer Office, Los Angeles, for construction of recreation building and utilities at an airport at Palmdale, Calif.

**DWELLING UNITS**—Zoss Construction Company, Los Angeles, has been awarded \$959,000 contract by Housing Authority of the City of Los Angeles, for construction of 512 temporary dwelling units, Los Angeles, Calif.

**DWELLING UNITS**—Robert McCarthy, San Francisco, has been awarded \$341,989 contract by FPHA, San Francisco, for construction of 248 family dwelling units in Richmond, Calif.

**DWELLING UNITS**—Standard Building Company, San Francisco, has been awarded \$842,815 contract by FPHA, San Francisco, for construction of 494 family dwelling units, etc., in Richmond, Calif.

**DWELLING UNITS**—S. J. Amoroso Construction Company, San Francisco, has been awarded \$696,300 contract by FPHA, San Francisco, for construction of 369 family dwelling units, etc., Richmond, Calif.

**DWELLING UNITS**—J. O. Oltman & Son, Los Angeles, have been awarded \$188,400 contract by Housing Authority of the City of Los Angeles, for construction of 88 temporary family dwelling units in Los Angeles, Calif.

**CONSTRUCTION**—George Petersen, San Leandro, has been awarded contract by U. S. Engineer Office, San Francisco, for construction in the San Francisco Bay Area.

**DWELLING UNITS**—E. P. Dentzel and George H. Whyte, Alhambra, have been awarded \$539,367 contract by FPHA for construction of 300 temporary dwelling units in Los Angeles County, Calif.

**FACILITIES**—G. W. Williams Company, Burlingame, has been awarded contract by U. S. Engineer Office for additional facilities in the San Francisco Bay Area, to cost over \$100,000.

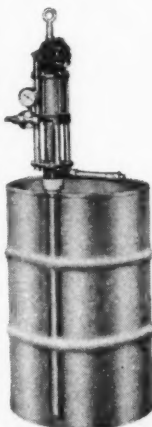
**TARGET RANGE**—H. C. Geyer, Monterey, has been awarded contract by U. S. Engineer Office, San Francisco, for construction of target range in Central California.

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## THE WEST ON ITS WAY

**BUILDING**—MacDonald & Kahn, Inc., San Francisco, have been awarded \$100,000 contract by U. S. Engineer Office, Sacramento, for construction of building in Solano County, Calif.

**BUILDINGS**—Edward R. Siple, Los Angeles, has been awarded contract by U. S. District Engineer Office, for construction of buildings and facilities at an AAF flight strip at Oxnard and Lomita, Calif.

**BUILDING**—Zoss Construction Company, San Diego, has been awarded \$129,600 contract by U. S. Navy, San Diego, for construction of a group of buildings at the Amphibious Base, Coronado, Calif.

**DWELLING UNITS**—Jas. I. Barnes Construction Company, Santa Monica, has been awarded \$560,000 contract by FPHA, San Francisco, for construction of 300 temporary dwelling units, Long Beach, Calif.

**CONSTRUCTION**—W. C. Beggs, Los Angeles, has been awarded contract by U. S. District Engineer Office, Los Angeles, for construction at Air Transport Command Base, Palm Springs, Calif.

**CONSTRUCTION**—W. F. Lynn, Oakland, has been awarded contract by U. S. Engineer Office, San Francisco, for construction in San Francisco Bay Area, Calif.

**BUILDING**—Scherer and Pritchard, Redlands, have been awarded contract by the U. S. District Engineer Office, Los Angeles, for construction of a classification building, utilities, etc., at Camp Anza, Arlington, Calif.

**DRILL HALL**—H. E. Rahlmann, 251 Kearny Street, San Francisco, has been awarded contract by U. S. Coast Guard, for construction of frame drill hall at U. S. Coast Guard Station, South San Francisco Airport, Calif.

## COLORADO

**HOUSING PROJECT**—Larsen & Udesen, Denver, have been awarded contract by FPHA, Kansas City, Mo., for construction of a housing project addition in Kokomo, Colo., to cost about \$60,000.

**CONSTRUCTION**—Brown Construction Company, Colorado Springs, Colo., has been awarded \$115,448 contract for construction in Mesa County, Colo.

**BUILDINGS**—Johns Engineering Company, Denver, Colo., has been awarded contract by U. S. District Engineer Office, Denver, for construction of a celestial navigation trainer office building, flight control building and service club at an air base in Pueblo County, Colo.

## IDAHO

**CONSTRUCTION**—Jerry Nottingham, 329 Grove Street, Boise, has been awarded contract by U. S. Engineers, Portland office, for heavy construction in Idaho.

**BUILDING**—J. A. Terteling & Sons, Boise, have been awarded contract by U. S. Engineers, Portland office, for construction of building in Elmore County, Idaho.

**HOSPITAL FACILITIES**—H. J. McNeel, Caldwell, Idaho, has been awarded \$60,000 contract by U. S. District Engineer Office, Portland, for construction of additional hospital facilities in Ada County, Idaho.

**HOUSING UNITS**—Thirty family housing units, to be publicly financed, have been assigned Triumph, Idaho, according to the National Housing Agency. The facilities will serve employees of the Triumph Mining Company.

**TRAILER UNITS**—McLaughlin Construction Company, Livingston, Mont., has been awarded contract by FPHA, Seattle, for construction of 100 trailer housing units at Pocatello, Idaho, to cost \$42,000.

**HOUSING UNITS**—B. H. Sheldon, Spokane, has been awarded \$157,894 contract by FPHA for construction of 60 housing units on city-owned property at Coeur d'Alene, Idaho.

## MONTANA

**DWELLINGS**—Highland View, Inc., Great Falls, will build 70 dwellings at 13th and 18th Streets, and 9th and 10th Avenues, Great Falls, Montana, for self. A sewer system is included in the project. Estimated cost \$350,000.



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## NEVADA

**CONSTRUCTION**—J. E. Burrell & Son, Long Beach, have been awarded contract by U. S. District Engineer Office, Los Angeles, for construction of Station Echelon, facilities, program of temporary construction at an Army Air Force gunnery school, Las Vegas, Nev., to cost between \$60,000 and \$70,000.

**CONSTRUCTION**—General Construction Company and J. Walter Johnson, Los Angeles, have been awarded contract by U. S. District Engineer Office, Los Angeles, for temporary construction at an Army Air Force gunnery school, Las Vegas, Nev.

**AVIATION FACILITIES**—Dinwiddie Construction Company, Inc., San Francisco, has been awarded \$1,108,200 contract by Navy Department, Washington, D. C., for aviation facilities, Naval Auxiliary Air Station, Fallon, Nev.

**SCHOOL BUILDING**—General Construction Company and J. Walter Johnson, Los Angeles, have been awarded contract by U. S. District Engineer, for construction of school building and utilities at a gunnery school near Las Vegas, Nev.

**TEMPORARY CONSTRUCTION**—R. P. Daum, Inglewood, Calif., has been awarded contract by U. S. District Engineer Office, Los Angeles, for temporary construction program at an auxiliary operating base, Indian Springs, Nev.

## NEW MEXICO

**DWELLING UNITS**—C. H. Leavell, El Paso, has been awarded contract by FPHA for construction of 175 dwelling units in Gallup, New Mexico.

## OREGON

**CONSTRUCTION**—Gilpin Construction Company, Portland, has been awarded contract by Columbia Shipbuilding and Drydock Corp. for construction of dock facilities, machine shop, warehouse and completion of unfinished office building in Columbia City, Ore.

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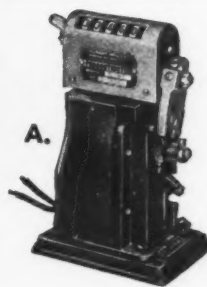
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## THE WEST ON ITS WAY

**HOUSING UNITS**—Waale-Camplan Company, Portland, have been awarded \$92,200 contract by FPHA for construction of 30 housing units at Mapleton, Ore.

**TRAILER UNITS**—Waale-Camplan Company, Portland, has been awarded contract by FPHA for construction of 25 trailer units, Forest Grove, Ore.

**DWELLING UNITS**—Brennan and Cahoon Construction Company, Pendleton, Ore., have been awarded contract by FPHA, Seattle, for construction of 40 dwelling units at Huntington, Ore., to cost \$98,140.

**BUILDING**—R. J. Hillstrom, Marshfield, has been awarded contract by Navy Department, Washington, D. C., for construction of dispensary building at an auxiliary air station at Northbend, Ore.

**BUILDING**—L. Strandberg, Vancouver, Wash., has been awarded contract by U. S. Army Engineers, Portland, for construction of building in Columbia County, Ore.

**AIR STATION**—Ford J. Twaits Company, 450 S. Boylston Avenue, Los Angeles, and Morrison-Knudsen, 810 Title Guarantee Building, Los Angeles, have been awarded contract by U. S. Navy, Washington, D. C., for construction of an auxiliary air station at Klamath Falls, Ore., to cost \$3,000,000.

## UTAH

**BUILDING**—O'Connor and Mendenhall, Springville, Utah, have been awarded contract by U. S. District Engineers, Salt Lake City, for construction of a CCC building at Wendover, Utah.

**BUILDING**—Jacobsen Construction Company, Salt Lake City, has been awarded contract by U. S. District Engineer, Salt Lake City, for construction of hospital recreation building at the Salt Lake Army Air Base, Salt Lake City, Utah.

**DWELLING UNITS**—The Nordin Construction Company, Salt Lake City, has been awarded contract to build 88 dwelling units for the American Land Company in Salt Lake City, to cost about \$350,000.

**CONSTRUCTION**—Paul Paulsen Company, Salt Lake City, has been awarded contract by FPHA, Kansas City, Mo., for construction at Wendover, Utah.



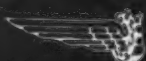
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## WASHINGTON

**SCHOOL**—C. R. Beal, Seattle, has been awarded contract for construction of addition to the junior high school building, Port Orchard, Wash.

**DWELLINGS**—Nelse Mortensen & Company, 1021 Westlake Avenue, N. Seattle, have been granted priorities for construction of 522 single-family dwellings in the Skyway Park housing project between Seattle and Renton. The total cost will be about \$2,500,000.

**DWELLING UNITS**—Bergesen, Wick & Dahlgren, Tacoma, have been awarded \$60,160 contract by Architect John W. Maloney, Yakima, for construction of 20 dwelling units to be located at Rock Island, near Wenatchee, Wash.

**DORMITORY UNITS**—Nettleton & Baldwin, Seattle, have been awarded \$518,000 contract by King County Housing Authority, for dormitory units in Auburn, Wash.

**CONSTRUCTION**—Aqua Systems, Inc., 701 E. Third Street, Los Angeles, have been awarded contract by U. S. District Engineer Office, Seattle, for additional installation and construction in Skagit County, Wash.

**BUILDING**—A. G. Homan, Olympia has been awarded \$50,000 contract by U. S. District Engineer Office, Seattle, for construction of building in Grays Harbor County, Wash.

**CONSTRUCTION**—Airport Buildings, 212 W. Hudson Street, Seattle, have received \$91,429 contract from U. S. Engineers for additional construction in Skagit County, Wash.

**CONSTRUCTION**—Howard S. Wright & Company, 407 Yale Avenue, N. Seattle, have been awarded contract by U. S. Engineers for miscellaneous construction in Snohomish County, Wash.

**CONSTRUCTION**—McAtee and Heathe, E. 3527 Trent Avenue, Spokane, have been awarded contract by U. S. Engineers for additional installation and construction in Grant County, Wash.

**CONSTRUCTION**—L. S. Ross Construction Company, 4554 Thackeray Place, Seattle, has been awarded contract by U. S. Engineers for additional construction at Paine Field in Snohomish County, Wash.

**OFFICERS QUARTERS**—J. W. Bailey Construction Company, Seattle, has been awarded \$189,873 contract by U. S. Navy, for construction of officers' quarters and dispensary at Pier 41, Naval Station, Seattle.

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**BUILDING**—J. C. Boseplug, Seattle, has been awarded contract by U. S. District Engineer Office, Seattle, for construction of building in Pierce County, Wash., to cost between \$40,000 and \$50,000.

**BUILDINGS**—Hord & Stuart, Portland, has been awarded contract by U. S. District Engineer Office, Portland, for construction of building in Clark County, Wash.

**SCHOOL**—Cecil R. Beal, Seattle, has been awarded \$101,320 contract by Public Buildings Administration, Washington, D. C., for construction of 12-room addition to the High Point School, Seattle, Wash.

**WAREHOUSES**—Johnson, Goetz & Brennan, Seattle, have been awarded \$50,000 contract by U. S. District Engineer Office, Seattle, for construction of warehouses in King County, Wash.

**FACILITIES**—Sound Construction & Engineering Company, Seattle, and Ford J. Twaits Company, Seattle, have been awarded contract by U. S. District Engineer Office, Seattle, for construction of additional motor maintenance facilities in Spokane County, Wash., to cost \$50,000.

**SCHOOL**—Waale-Camplan Company, Inc., Portland, has been awarded \$110,400 contract for construction of Burton Homes Elementary School, Vancouver, Wash.

**SCHOOL**—Waale-Camplan Company, Inc., Portland, has been awarded \$100,400 contract by Public Building Administration, for construction of Ogden Meadows Junior High School, Vancouver, Wash.

**SCHOOL BUILDINGS**—Waale-Camplan Company, Inc., Portland, has been awarded contracts by Public Buildings Administration to building school, Bagley Downs Elementary School, to cost \$111,400 and school for McLoughlin Heights High School, to cost \$115,900 at Vancouver, Wash.

## WYOMING

**BUILDING**—Newstrom, Davis & Company, Denver, have been awarded contract by U. S. District Engineer Office, Denver, for construction of building and utilities in Laramie County, Wyo.

**CONSTRUCTION**—Morrison-Knudsen, Boise, Idaho, has been awarded contract for construction in Laramie, Wyo., for the Union Pacific Railroad Company.

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## WESTERN

# TRADE WINDS

NEWS ABOUT THOSE WHO DISTRIBUTE AND  
SELL INDUSTRIAL EQUIPMENT AND MATERIALS



W. H. Richardson has been appointed general manager of activities of all divisions of The Timken Roller Bearing Company on the West Coast and in the Orient with headquarters in San Francisco. In this capacity he is to be in charge in that territory for the sale and merchandising of roller bearings for original equipment in railroad cars and locomotives, automobiles and trucks, and all types of industrial machinery, as well as sales and merchandising of bearings for replacement purposes. He will also supervise all sales of Timken steel and tubing and Timken rock bits.

Harry D. Utter of the Los Angeles office has been appointed San Francisco manager of the Independent Pneumatic Tool Company, 315 South Van Ness Ave.

The Lang Company, Salt Lake City, has been appointed sales and service representative of Wheelco Instruments Company, Chicago, in Utah, Idaho, Wyoming and Nevada.

Frey Industrial Supply Company, of 3828 Santa Fe Avenue, Los Angeles, has been appointed representatives in Southern California for the Taft-Peirce Mfg. Co., Woonsocket, R.I., line of gages and extensive line of small tools used in the set-up and inspection of machine work.

Layton K. Nosler and S. G. Palmer have joined as partners in founding the Industrial Supply Company in Roseburg, Oregon. They plan to cover the Willamette Valley of Oregon, specializing in saw mill, logging and industrial supplies. Among the lines they represent are: Bethlehem Steel Company, Chain Belt Company, Crane Company, Goodyear Tire and Rubber Company, R. Hoe and Company and Trojan Powder Company.

Delmar G. Berglund, Jr., has been appointed Pacific Coast manager of A. Leschen and Sons Rope Company of St. Louis, Missouri, with headquarters at 520 Fourth Street, San Francisco.

Bert Borchardt has been appointed manager of the Arens Controls, Inc., Chicago, West Coast branch.

Tube Turns, Louisville, Ky., has opened two new West Coast offices, one in the Russ Building, San Francisco, where T. H. Pike, Jr., district manager for the Pacific Coast area, has headquarters; and the other in the Smith Tower, Seattle, where John M. Hartley, formerly of the Los Angeles office, handles matters pertaining to Washington, Oregon and British Columbia.

The Atlas Brass Foundry, 1901 Santa Fe Avenue, Los Angeles, has taken over the Union Foundry by lease agreement in order to increase production facilities. Lee Doxie, former owner of Union Foundry, manages the new division.

J. C. Lewis, who has been in the Los Angeles sales and engineering department of Drayer & Hanson, Inc., Los Angeles manufacturers of heat exchange equipment, has been appointed field representative for the company in Arkansas, Louisiana, Texas and Oklahoma.

Martin Thomas and Garold D. Raff, watch makers who operate jewelry stores in Huntington Park, California, are lending their skilled help and service to urgently needed maintenance of timing devices in factories in the Los Angeles area. However, due to the labor situation they are unable to expand this highly valuable service to take care of all customers who wish to take advantage of it at present.

Cooper-Bessemer Corporation, engine builders, who have had Los Angeles and Seattle offices for some time, have established a San Francisco office at 401 Russ Bldg., with John K. McKissick as service representative.

H. G. Mackenzie has been appointed manager of the Atkins Pacific Northwest



Division, with headquarters at the Atkins Portland, Ore., office. Mr. Mackenzie brings unusually broad experience in saws and machine knives to industries in the Northwest, for in addition to spending a number of years engineering and selling metal cutting saws, he was operator of his own company as a manufacturer of saws and machine knives.

Harry J. Crawford, for the past two years factory representative for Aircraft



Tools, Inc., Los Angeles, has been appointed sales manager. Prior to his services with Aircraft Tools, Crawford was aircraft representative for the Atlas Brass Foundry and was instrumental in that company's conversion from peace to war production. Aircraft Tools, Inc. has added a tool repair division which makes possible the repair of worn or broken tools for aircraft manufacturers. A complete stock of parts is carried to permit prompt repairs.

The Walworth California Company of San Francisco has completed arrangements for distribution of Walworth products in branch territories formerly covered by district warehouse branches, and will concentrate its activities in the Northern California area as a wholesale distributor of Walworth quality valves and fittings, pipe and allied industrial supplies serving shipyards, contractors, etc., operating out of its San Francisco office and warehouse, located at 665 Sixth Street, San Francisco, represented by the following: Gilson Supply Co., 1106 Madison St., Oakland; Dallman Supply Co., 6th and Que St., Sacramento; Slakey Bros., 1749-34th St., Sacramento; Coast Pipe & Supply Co., 150 Almaden Ave., San Jose; Valley Pipe & Supply Co., 507 Broadway, Fresno. In addition to the above, Coast Pipe & Supply Co., 631 Sixth St., San Francisco, will handle Walworth products and serve the plumbing and heating trade in the San Francisco area.

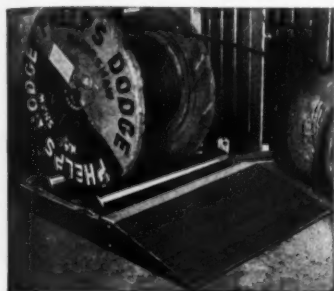
W. B. Merriam, general manager, has been appointed executive vice president of Globe Products Manufacturing Company, 3380 S. Robertson Boulevard, Los Angeles, manufacturers of the Globe Miller, portable milling attachment for standard lathes, and other machine tools.

W. T. Billard Co., 536 W. Washington Blvd., Los Angeles, has been appointed sales representative for American Engineering Company Lo-Hed Hoist in Southern California, Southern Nevada and the State of Arizona.

E. S. Daniels, Victor Equipment Company, San Francisco, has been elected director of the national organization of welding distributors which was formed when executives of welding equipment and supply houses met in Chicago. One of the firms represented at the initial meeting was J. E. Haseltine & Company, Portland, represented by W. A. Haseltine.

# THE SHOWCASE

**Cable Reel Dollies**—This dolly does away entirely with blocks and jacks—simply roll the coil onto the dolly and start to pay out.



Therefore saves time by eliminating at least two operations. Comes in two sizes. Metzgar Company, Grand Rapids, Mich.

**Portable Generator**—New air-cooled Epcon B-30 generator is believed to be the most powerful for its size ever built. It delivers 3000 watts, 110-volt A.C., 60 cycle; weighs only 305 pounds. Length including the base is 34 inches; height 26 inches. Features are dependability, overload margin, 'round-the-clock operation, simplification of design, use of high-grade metals, V-belt drive and close tolerances. Electrical Products Consolidated, Seattle, Washington.

**Portable Cable Type Winder**—Labor and time saving device to tape comparatively long cable or plurality of cables into a single unit at a point where standard factory cable taping equipment cannot be used. Without power itself, it is used with a standard portable electric drill so operator holds handle of drill in one hand and in the other hand the handle of the cable



tape winder. It is adaptable to different size cables and is of value in shipbuilding where many cable taping operations are performed by hand on the job during construction. Leathem D. Smith Shipbuilding Company, Sturgeon Bay, Wisconsin.

**Metal Processing Chemical**—Process K, new metal processing chemical, has made important economies possible by taking care of three jobs in one operation. A soak in Kelite Process K cleans the metal, creates a good tooth for painting or plating and inhibits the action of rust. No critical time element is involved in the use of Process K. It thoroughly removes grease, scale and corrosion, but does not attack healthy metal. Kelite Products, Inc., Los Angeles, Calif.

**Portable Generator**—Gasoline - driven portable generator for rapid battery charging is designed to charge 6, 12 and 24 volt batteries at 10 to 300 amp. and consists of a generator driven by a 6-hp. single cylinder, gasoline engine equipped with air



cleaner, gasoline filter, magneto, self-starter or rope starter, gas tank and remote control. The entire unit is mounted on a skid-type base, equipped with 5 in. wheels. When the unit is in use the wheels are raised from the ground. The unit is used also as a d.c. lighting plant with output range from 1000 to 3000 watts as required. Hunter-Hartman Corporation, St. Louis, Missouri.

**Flashlight Battery**—Rechargeable storage battery which fits popular two cell 1 1/4 size D flashlight cases. Battery can replace up to 400 or more dry cells. Battery charges



are available in single and gang types, for use on both alternating current and direct current. Ideal Commutator Dresser Company, Sycamore, Illinois.

**Ink**—A non-settling, non-clogging stencil ink for marking cartons, wooden boxes, burlap, etc., for shipping; dries instantly and requires little pressure in applying to the stencil. There is no building up of ink on the brush. It is a thin type of ink; however there is no loss of color strength. Every drop in the container can be used. Diagraph-Bradley Stencil Machine Corporation, St. Louis 8, Missouri.

**Card Holders**—Stock room bin card holders made of ivory plastic are available in a variety of shapes and sizes for immediate shipment. They are applicable to any flat surface, on wood by means of tacks, for which holes are provided, or on metal with glue, and consist of the plastic holder itself, an insert tab on which description of the article may be typed and a covering sheet of transparent plastic. Changes are easily made by inserting revised card slips. The material is washable. Plastic Division, Hollywood Athletic Company, Los Angeles 14, Calif.

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Company.....

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## THE SHOWCASE (Cont'd from Pg. 63)

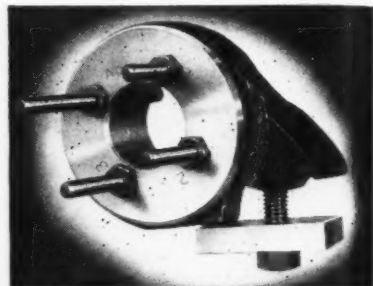
**Transformer and Distribution Cart**—New portable, time and labor-saving portable transformer and distribution cart has been designed for use in production and assembly plants, and for all outdoor assembly work requiring 110-volt electrical supply to portable handtools and lighting equipment, where the work is of a flexible nature, and remote from a standard branch lighting or power control panel. The complete weather-proof unit, of galvanized steel construction, is mounted on sturdy four-inch castor wheels for quick and easy movement. In the cabinet is a 440/115-230V transformer, a 2510-W5 motor starter, and a 12-circuit multibreaker load

center. Weather-proof hoods on the sides of the cart protect additional 440V sub-feed outlets and 110V plug-in receptacles. Top-deck rack and support hooks provide convenient space for materials and portable cords. *The Square D Company, Los Angeles, San Francisco and Denver.*

**Rivet Driver**—The Thor RIV-Driver is a pneumatically operated hand tool which will drive four "blind" rivets a minute for installation of instrument panels and other plane assemblies. It eliminates the present slow method of hand-feeding a blind rivet into an assembly, cranking an instrument into it, and then wrenching the crank to smash the rivet on the opposite side. The new device is a simple, portable type tool which operates in a 4-step cycle at the flip of the operator's thumb, screwing a mandrel into the rivet, upsetting it and swiftly unscrewing to go into the next operation. Weighing only four and a quarter pounds, it provides handling and

operating ease for both men and women operators. *Independent Pneumatic Tool Company, Chicago 6, Ill. and Los Angeles Calif.*

**Multiple Carriage Stop**—New Multiple Carriage Stop is easily and quickly installed, clamps rigidly to ways of lathe in



one minute and, once set, always set, giving four accurate indexed positions, is fool-proof and has nothing to get out of order; a novice can get accurate length and depth. Made in sizes to fit all lathes. *Dis Manufacturing Co., Los Angeles, Calif.*

**Radionic Frequency Meter**—Four new models of Telrad line of frequency meters are crystal-controlled and by means of a class "C" harmonic amplifier circuit em-



bodied in the units, accurate frequency carrier signals are provided every 10 KC and every 100 KC from one hundred cycles to forty-five megacycles. A carrier system is produced every 1000 KC from one megacycle to one hundred twenty megacycles. A convenient panel-mounted "on-off" switch permits use of a 1000 cycle modulated note. *Fred E. Garner Company, Chicago, Illinois.*

**Blowers**—New Standard Duty Blowers have a four-way discharge and may be installed in any one of the following discharge positions: top horizontal, top vertical, bottom horizontal, bottom vertical. These belt-driven units, known as No. 3 Arrangement Blowers, can be furnished on proper priority order, from 9 in. to 24 in. wheel diameter, single inlet, single width; and double inlet, double width. *Utility Fan Corporation, Los Angeles 11, Calif.*

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# YOURS FOR THE ASKING

1349

**Electric Industrial Trucks**— Seventy - six page catalog "Yale Electrical Industrial Trucks" has been published to acquaint industry with their war-standardization line of electric industrial trucks. The war model catalog contains detailed descriptions of all models, as well as a great many application illustrations, showing many uses of industrial power trucks. A separate section is devoted to the workings of the War Production Board's Limitation Order No. L 112, as applied to Yale Industrial Trucks. *The Yale and Towne Manufacturing Company, Philadelphia, Pennsylvania.*

1350

**Rivets**—Bulletin No. 89 covers improved Cleco Riv-N-Jector and is of special interest to those in the aviation industry. *The Cleveland Pneumatic Tool Company, Cleveland 5, Ohio.*

You owe it to yourself to keep posted—only the efficient business survives under the strain and pressure of the war effort. Literature listed in these columns may be just the answer to your need for greater production, substitute materials or knowledge of how to care for your equipment. Just drop a note to Western Industry, 503 Market St., San Francisco, and copies will be forwarded to you. If you do not use business letterheads, please name your company affiliation.

1351

**Post War**—Illustrated handbook, "Community Action for Jobs & Profits" is designed to help local communities throughout the country to strengthen their economic foundations in readiness for the post-war era. *Los Angeles Dept. of Commerce, District Office, 1540 Federal Bldg., Los Angeles, Calif.*

1352

**Lift Truck Operator's Guide**—Pocket size booklet interprets to industrial truck operators the importance of the materials handling function and emphasizes the increasing variety of tasks that are being given lift trucks. The booklet is designed to increase the skill of both veteran operators and new men, and by illustrations emphasizes typical load-carrying devices and methods of stacking. Safe, space-saving methods of building unit loads are clearly and quickly shown in pictorial form. *Towmotor Corporation, Cleveland 10, Ohio.*

1353

**Pumps**—New pump bulletin 141A describes improved methods of pumping water from deep wells. Two basic methods of raising water are illustrated—the turbine and by hypocycloidal. The difference between oil and water lubrication is also shown. *Peerless Pump Company, Los Angeles 31, Calif.*

1354

**Synthetic Rubber**—Dictionary of synthetic rubber words gives pronunciation and meaning of chemical and scientific terms used in connection with synthetic rubber. *Hycar Chemical Company, Akron, Ohio.*

1355

**Visual Training Aids**—New type catalog-directory, classifies a wide range of visual training aids for use in industry. By a system of indexing, cross-indexing and classifying, the instructor can quickly locate the subject wanted. In addition, "previews" of each slidefilm and motion picture are provided by photographic illustrations reproduced from the films themselves. The 80-page directory gives number of pictures in each slidefilm, number of each series of slidefilms, description of material visualized, and type of projector best suited to various industrial training needs. *The Jim Handy Organization, Detroit, Mich., and New York.*

1356

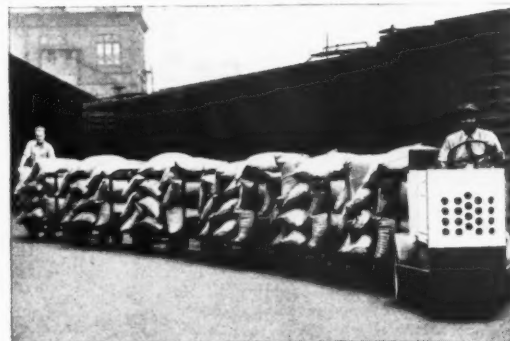
**Welding**—16-page, pocket-size booklet, "Preventing Welding and Cutting Fires," is written in easy-to-understand style, and contains instructions to users of welding and cutting equipment on how to reduce potential fire losses. Brief, clear discussions on the chief causes of fires and practical, common-sense measures for preventing them are given. *International Acetylene Association, New York 17, N. Y.*

1357

**Flexible Tubing and Bellows**—Illustrated engineering manual SS-44 on Rex-Flex Stainless Steel Flexible Tubing and Bellows contains much engineering data and specifications including tables of sizes, weights, wall thicknesses, pressure data, minimum bending radii and other useful detail. One feature is the double page spread giving, in chart form, line-loss data on Rex-Flex Tubing and Elbows. *Chicago Metal Hose Corporation, Maywood, Illinois.*

## 2 HEAVY DUTY, SPARK-PROOF FLOORING MATERIALS

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# YOURS FOR THE ASKING (From Pg. 65)

1358

**Preserved Wood**—Well illustrated 26-page book, "Economic and Permanent Construction with Pressure-Treated Wood," discusses uses of pressure-treated lumber in construction and in industry. It is designed to serve as a guide in material selection for engineers, architects, contractors, builders and maintenance supervisors. The book explains the processes by which lumber is treated to protect it against decay, fire, acid, termites and marine borers. One section deals with termite control and another tells about the engineering service the company offers in determining the proper treatment of lumber to assure permanence under severe conditions. *Koppers Company, Wood Preserving Division, Pittsburgh, Penna.*

1359

**Oil Conditioners & Filters**—Booklet, "Winslow Oil Filters and Conditioners in Industry," of value to those using or contemplating use of filtration equipment for coolant, cutting, hydraulic, transformer, diesel and lubricating oils is illustrated and includes diagrams of typical installations of Winslow Oil Conditioners and Oil Filters. The contents include a general discussion of what happens to oils in industry, description of special features of Winslow equipment, application of filters or conditioners to machine tool operation, hydraulic devices, heat exchangers and transformers, general lubrication applications and internal combustion engines of all types. *Winslow Engineering Company, Oakland 8, Calif.*

1360

**Micromax pH Recorders**—Catalog N-96(1) "Micromax pH Recorders" describes new, easy-to-install, equipment consisting of an unusually rugged glass-electrode assembly and a Micromax Recorder, either a strip-chart Model S or a round-chart Model R. This equipment is of interest to operators of industrial processes, such as neutralization, precipitation, corrosion-prevention and boiler feedwater treatment, where it is important to be able to "see" pH at a glance or to refer to a continuous pH record drawn on a handy, easy-to-file chart. *Leeds & Northrup Company, Philadelphia 44, Penn.*

1361

**Wool Felt**—"Felt Facts" is a booklet telling the story of the manufacturing and some of the myriad uses of wool felt. It is written in non-technical style and various steps of the manufacturing process are described and illustrated. Many applications in engineering and mechanical fields as an alternative for rubber, cork, certain fabrics and plastics are included. *The Felt Association, Inc., New York 17, N. Y.*

1362

**Coolant Cooler**—2-page, illustrated technical bulletin No. 75-AC describes new Froströde coolant cooler which is designed for accurate temperature control of coolants and lubricants in machine processing. Complete specifications and an illustration of a typical installation are included. *Froströde Products, Detroit 3, Mich.*

1363

**Car Spotters**—16-page book 1992 on self-contained Electric Car Spotters covers vertical-capstan units of 5,000 and 10,000 lbs. starting pull capacity, for mounting on a stationary foundation, or equipped with portable frame for convenient transfer from one location to another. *Link-Belt Co., Chicago 8, Ill.*

1364

**War Strapping Methods**—Increasing use of steel strapping for protecting war shipments and helpful information to shippers of war products is given in house publication, *Acme Process News* No. 14. Manufacturers of war products are invited to get ideas by being on mailing list for this helpful publication. *Acme Steel Company, Chicago 8, Illinois.*

1365

**Hydraulic Machinery**—Two new bulletins, SM 843 describing different models of flame hardening and special machinery, and PT 845 describing several models of hydraulic presses, have been released by the *Hydraulic Machinery, Inc., 12825 Ford Road, Dearborn, Mich.*

1366

**Paints**—Catalog lists Valdura line of heavy duty industrial maintenance paints. Fully illustrated, the catalog provides application suggestions, product descriptions and technical data in complete detail, and will help the maintenance man or purchasing agent plan his paint requirements and give him information of the characteristics of drying, coverage and application. *American-Marietta Company, Chicago 11, Ill.*

1367

**Universal Joints**—Illustrated 24-page 1944 catalog for the designer, engineer, purchasing agent and others who have use for universal joints or their procurement. *Dix Manufacturing Company, Los Angeles 11, Calif.*

1368

**Subject Matter Index**—Pamphlet classifying, according to subject matter, digests of interpretations of price schedules, regulations and orders issued up to June 30, 1943, including digests of interpretations of specific price schedules and regulations. *Office of Price Administration, Washington, D.C.*

1369

**Nutrition**—"Planning Meals for Industrial Workers" is a booklet containing suggestions for cafeteria, canteen and lunch-box meals and between-meal snacks. *Industrial Nutrition Service, Nutrition and Food Conservation Branch, Food Distribution Administration, War Food Administration, Washington 25, D.C.*

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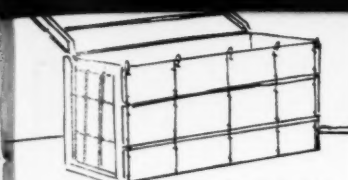
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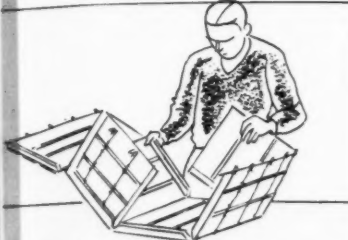
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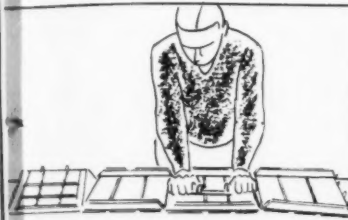




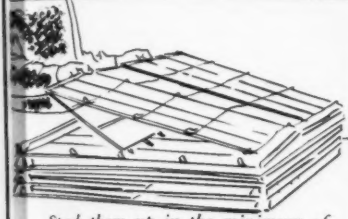
Cabco Crate opened with bare hands ready for unpacking.



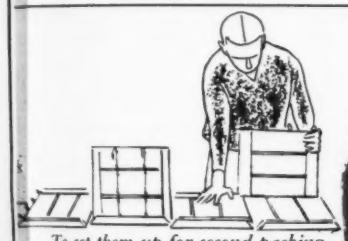
Loosen end loop fasteners and flatten crate.



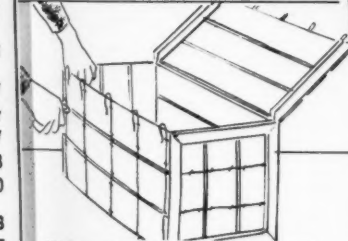
Fold end sections in so that crate lies flat.



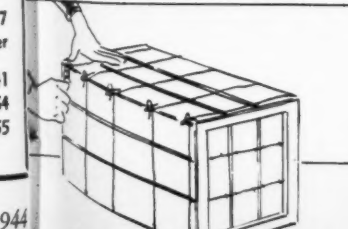
Stack them up in the minimum of space.



To set them up for second packing and shipment, first unfold ends.



Tighten wire loop fasteners in end sections, crate is ready to pack.



Close cover with simple wire loop fasteners and it is ready for



## Used and re-used time and time again

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to become damaged in packing, unpacking and returning. Furthermore, under proper conditions Cabco can present as new an appearance on the second and third shipments as they do on the first.

Cabco Allbound Boxes and Crates are made of light weight wood veneer stitched together with steel wire and re-inforced at the ends. They are extremely light in weight but due to scientific construction they possess great strength. Because they come to you flat in one piece they require the minimum of storage space. Wire loop fasteners eliminate the use of nails, make it possible to open and close them with your bare hands as often as you wish. These fundamental construction features give the same advantages to the second and third user as they do to the first.

Yes, no matter how you look at it Cabco Allbound Crates and Boxes get top honors. And, no matter what you may be shipping . . . anything from beans to bullets .

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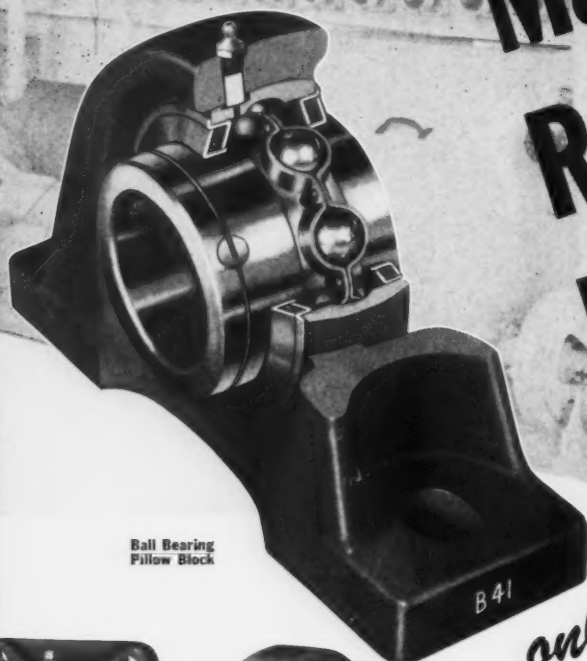
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**3. Pre-Lubricated**

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